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Fifth Avenue at Madison Square Looking South
Café Martin on the Right

By FRANK H. MORGAN

THE present aspect of the residence fronts of Fifth avenue, New York, with the miles of ornamental and encroaching façades of porches, steps, stoops, porticos and courts, is soon to be changed. The city has made up its mind to act forthwith and effect the long-talked-of reformation of Fifth avenue as a residence drive.

Preparations are making to begin the general work of reclamation of all those portions of the avenue, from Washington Square to Central Park, which belong to the walk and roadway but which, as a matter of municipal privilege or tolerance, have been built upon by property owners along the avenue for considerably over half a century. No such sweeping changes of this nature along a great residence avenue have ever been known in this country; and now that the beginning of them is in sight, the results will be watched with keen interest both in and out of Manhattan.

Believing that reforms, like charity, should begin at home, the city proposes to give its first and immediate

attention to the new Library front, at the Forty-second street corner, and work from there towards Washington Square. The Library wall is most evidently without the house-line and will come down forthwith. Luckily for the interests involved, the Carrère & Hastings' plans for the new Library were called to the attention of the city's Art Commission in season for the commission to discover that the more expensive approaches to the building were encroachments on the avenue. The plans were changed accordingly and the commission has saved the city large expense thereby.

While the present activity in the Fifth avenue reform is the natural result of years of agitation of the subject, and has its justification legally in recent court decisions in which the city's right to its own streets have been affirmed, the immediate occasion is the absolute and urgent necessity of providing a roadway of much greater capacity. The roadway crush on the avenue has grown to unbearable intensities, the forty-foot roadway originally provided proving utterly inadequate. In the hours of greater congestion it is only by the most expert handling

that the police are able to keep the streams of vehicles moving by an arrangement that places the slow ones next the curb and the others in the middle lines. As a result, if a vehicle gets into the middle lines, no matter how much the occupants may desire to stop at this hotel or that store or shop, it is often impossible to do so without difficult and dangerous side-streering or going on until the stream of vehicles has been thinned out.

The congestion of the roadway, it is believed, will be much relieved by adding width sufficient for two more lines of vehicles, and this relief of congestion will add greatly to values of property on the avenue, especially in the business district, where everything that prevents the convenient stoppage of vehicles at the curb militates against the value of that property for business purposes.

In order to get the needed width of roadway it has been decided to utilize fifteen feet of the present sidewalks. As the avenue was originally laid out the plans called for one hundred feet from house-line to house-line. Of this width thirty feet on either side were to be devoted to sidewalks and forty feet to roadway. It was believed at that time that the avenue would become a favorite residence one for the overflow from Madison Square, and that its sidewalks would become great and fashionable promenades. While this was realized in the years that have followed, the unanticipated use of the downtown portion of the avenue for business purposes has grown apace, and to-day it is as important as a business thoroughfare in one portion as it is favored for residence in others. Fifth avenue to-day is the most notable avenue in all the country for the high class of the interests to which it is devoted.

The proposed widening of the roadway to fifty-five feet and the giving of twenty-two and a half feet to each sidewalk and curb will meet the relative demands of vehicles and pedestrians in a much more adequate way. The avenue will not then be the Fifth avenue of fond memory, but it will meet the first great requirement of every city street, the sufficiency of its capacity for the travel that naturally belongs there.

The early commissioners who in 1811 laid out the city's streets and avenues, evidently anticipated a much later demand for sidewalk capacity since, two or more decades later, the city passed an ordinance permitting the private use of fifteen-foot spaces between the building line and the open sidewalk, between Sixth and Twenty-third streets. The resolution read:

Resolved, That the proprietors of lots on Fifth avenue, between Sixth and Twenty-third streets, be permitted to enclose a court fifteen feet wide with an open iron railing in front of their lots on each side of the avenue, the gates of which shall hang inside, and shall likewise be permitted to replace the curbstone thirty feet from the line of the avenue on each side, leaving a forty-foot carriage way and fifteen feet for court and fifteen feet for walks on each side; provided, however, that if the said courts should hereafter in the opinion of the Common Council be required for streets that the same shall be thrown open for streets.

It will be perceived that the city at this date anticipated the probable necessity at a later date of recalling the privileges granted. On October 4, 1844, the Mayor approved the following city legislation, looking to an extension of the privileges already granted.

Resolved, That the owners of building lots on both sides of Fifth avenue, between Twenty-third and Forty-second streets, be permitted to enclose fifteen feet of the width of the avenue on each side for court-yards, subject to the same rules and restrictions as have been imposed upon the holders of lots on the same avenue south of Twenty-third street, and subject also to such further regulations as the Common Council may deem requisite hereafter.

No municipal legislation is found granting even temporary privileges on the avenue other than these. All the encroachments on the avenue from Forty-second street northward to Central Park were therefore without even such sanction as is afforded by an ordinance. Now that the legality of such an ordinance is not only brought into question but is openly denied, it would appear that the residents of Fifth avenue have from generation to generation enjoyed the privileges of street occupancy because no one chose to question their right to such. Now that it is found that they have no rights, it is believed by the city that all residents will accept the pressing needs of the public for the completest use of its great avenue and yield with good grace to the removal of obstructive encroachments.

Looking to this outcome the residents on the avenue are in receipt of agreements, to which signature is asked, stipulating that they will remove the obstructions to the use of the entire sidewalk space in front of their respective house-lines on ten days' notice from the official authorities. Where such agreements are refused signature, the city will, of course, begin action or take such measures as may accomplish the speedy restoration of the entire street area to traffic uses. However, now that the higher courts have decided uniformly in favor of the city in the cases where litigation has been enforced, as in that of the Knickerbocker Trust Company's building at the corner of Thirty-fourth street, it hardly seems probable that the courts will be kept very busy with litigation in this direction.

In the matter of the Knickerbocker Trust Company building, the approaches were found to be a fifteen-foot encroachment on the avenue, and even with the steps removed there is yet an encroachment of several feet by the columns and overhanging cornice. This encroachment is not new, but existed in the days of the A. T.



FIFTH AVENUE NORTH FROM FIFTY-FIRST STREET
Showing Courts and Steps to be Removed



THE WALDORF-ASTORIA HOTEL
Floral Court on Left Hand Side to be Removed

Stewart mansion, when a marble fence occupied street area. When the mansion was torn down the Trust Company built out to the same line.

This building in Mr. Stewart's day was done under the prior ordinances already referred to, but which the courts have since held invalid. In the case of the Café Martin, wherein the courts were again appealed to, such have been the discouragements to the litigants that the owner of the property has agreed, it is announced at the Corporation Counsel's office, to remove the very obvious encroachment on the street and not put the city to any more court expense, provided no action in the matter is insisted upon until October, the café thus securing the use of its accustomed privileges on the avenue front for another summer season, including the French terrace, redolent with memories of its earlier Delmonico days.

The present Delmonico's will suffer the loss of avenue front features which add to the attractiveness of the great restaurant. This loss, however, is not as notable a one as that at Sherry's, on the other side of the avenue, where its Parisian Café within an enclosure of decorative plants has been a seasonable feature of the restaurant's frontage. At the Waldorf one will no longer be able to look out and down upon the bit of ornamental floral court that bordered the avenue walk underneath the windows of this great hostelry.

Among the club and residence fronts of beauty and expensive ornateness to be sacrificed are the University Club's walled court; the lawn of the Whitney residence at Fifty-seventh street; the artistic fence of wrought

iron about the house and gardens of the Cornelius Vanderbilt residence, said to have cost \$40,000 or more; and hundreds of other costly residence and other encroachments like those of the Gotham, St. Regis, and other hotels.

As far back as 1888, John D. Crimmins, then Park Commissioner, began the agitation for the changes which are now about to be enforced, foreseeing, as a real estate dealer, the need of the city for every foot of Fifth avenue's width. A large part of the city files upon this subject is devoted to correspondence carried on with Mr. Crimmins during the last five years, and his suggestions as to details have been generally followed. Even before this, however, Andrew H. Green, when Comptroller of Central Park, prior to 1868, called attention to the inconsistency of purchasing one hundred feet from private owners for a thoroughfare and immediately returning one-third of it to private occupation.

Opinions differ, even among the officials of the various city departments, as to whether the removal of all the encroachments will result in an improvement of the appearance of Fifth avenue. That the avenue will lose much of its present individuality goes without saying. That it will acquire another in a city where street encroachments are the rule rather than the exception is also patent. To what extent the new individuality will offset the old in the opinion of the public remains to be seen.

At the office of the City Art Commission it is stated that, whatever may be the artistic or architectural results of destructive work of this nature, the commission is not called upon to pass judgment unless it affects statues or other public art objects. But the commission will be officially interested in whatever may be done in the way of new construction. It, however, takes the broad ground laid down by Baron Haussman that not only must utility have preference over the artistic, but that the primary consideration in every city thoroughfare is, Does it get the people from one terminal to the other in the most direct way? Paris destroyed millions of dollars' worth of buildings in developing this idea, which she has never regretted. In this country, however, nothing so thorough and involving such important and expensive structures has yet been undertaken, it is believed; but this very fact emphasizes the importance which the accommodation of street traffic is assuming in the larger cities, and the sacrifices in other directions which it is considered to warrant.



FIFTH AVENUE AT THIRTY-FIRST STREET

GALVESTON PLAN SUCCESSFUL

A Study of the System at First Hand—Powers of the Commission—A Typical Board Meeting—Results of Four Years' Operation

By ERNEST S. BRADFORD

Formerly Fellow in Political Science, University of Pennsylvania

ANYONE who has read the several instructive articles which have appeared within the past eighteen months on the "Galveston Plan," who has had the good fortune to visit the Texas city, attend a meeting of the Commission, interview citizens, observe streets and public works, or study general municipal conditions in Galveston or Houston, begins to realize that the principle made use of in this so-called *new* plan is at once very simple and very old. It is the idea of the Board of Directors, so well known in the management of corporations, applied to government. Its application to municipal administration in this form is new, but it has been used for years in business. A group of men, chosen by the stockholders, direct the business of the company; why may not a Board, elected by the citizens, manage the city's undertakings—just a plain Board of Municipal Directors, though it is called a Commission?

The Galveston plan, it will be recalled, provides for: (1) A Commission of five men, who constitute the governing body of the city, instead of a mayor and council, so usual in the ordinary American city. This Commission or Board is the municipal government of the city of Galveston. One of the Commissioners is called the Mayor-President and presides at all meetings; he has no veto, however; he votes as one of the five and a majority settles every question. The duty of the Mayor-President is to oversee the city business as a whole and the law provides that he shall give six hours a day to his municipal duties. Of the other four, one Commissioner has charge of the Police and Fire Departments; one is Commissioner of Streets and Public Property, including lighting and street cleaning; one is Water Works and Sewerage Commissioner, and the fourth is Commissioner of Finance and Revenue. (2) To these five men of the Commission is given power (a) "to appoint all officers and subordinates in all departments of said city" (Charter, Sec. 8); (b) "to make and enforce such rules and regulations as they may see fit and proper for . . . the organization, management and operation of all of the departments of said city and whatever agencies may be created for the administration of its affairs" (Sec. 12); (c) "to make all laws and ordinances not inconsistent with the constitution and laws of this State, touching every object, matter and subject within the local government instituted by this act (Sec. 17).

This is large power to place in the hands of a board, though it is subject, of course, to the provisions of the city charter and the State constitution. The powers usually exercised by the mayor and council of the average American city are gathered up and put into the hands of this one group. With their power, however, goes responsibility also, for the Commission has no one else

on whom to lay the blame if matters do not go right. The Commissioners are elected at large—not by wards—but everybody knows to whom to go with complaints. The old theory of city government, "Divide up the power among many officers for fear it may be wielded to the disadvantage of citizens," has given place to the new principle, "Give a few municipal managers power enough to do the city business well, and hold them strictly accountable." It is the same idea as that used in the business corporation—the stockholders elect a board of directors and they, under the charter, exercise all the power needed to run the business successfully.

In Galveston, then, the Commission

- (A) Makes all laws and ordinances by majority vote.
- (B) Appoints and removes all city employees.
- (C) Determines salaries and qualifications for all employees.
- (D) Grants all franchises.

The Commission appoints a secretary, who keeps the minutes of the meetings of the Board and conducts correspondence; a treasurer, who receives and keeps all municipal funds; a city attorney; a judge of the city court ("Corporation Court"); an assessor and collector of taxes; an auditor; a health physician; a city engineer; a harbor master, who controls the wharves and the loading of all ships; a superintendent of water works and sewerage (who works under the Water Works and Sewerage Commission); an engineer of water works; a secretary of water works and sewerage; an inspector of plumbing, and a sexton or superintendent of cemeteries. In addition there is the Chief of Police, his assistant and all his force; a Fire Chief and his helpers, and all the other employees needed to care successfully for the business of a city of 35,000.

And the business is well done. It is the unanimous testimony of all who inspect Galveston that the streets are clean, water is good, the city lighting is excellent, salaries are very moderate, and the city finances well administered. These will be spoken of later in more detail. If results are to be taken as a criterion, the Commission system is to be vigorously commended.

A MEETING OF THE BOARD

Six men sit around a table in an office—five Commissioners and the City Secretary. At one end presides the Mayor-President, Henry A. Landes. Grouped about him are the Commissioner of Water Works and Sewerage, H. C. Lange, a conservative, solid, German-American; the Commissioner of Finance, I. H. Kempner, a keen, shrewd young fellow of thirty or thirty-five, a banker; the Commissioner of Streets and Public Property, V. E. Austin; and the Police and Fire Commissioner, A. P. Norman. Usually present also are Dr. Trueheart, City Physician; Mr. Kleberg, City Attorney, the Chief of Police and frequently other officials. Citizens may or may not be present, though all meetings are public. At the meeting which I attended, a citizens' committee presented a petition to bar saloons from the residence district. The committee left as soon as the petition was acted upon; they seemed to have great confidence that the Commission would give

their request fair consideration. The Commissioners discussed the petition in a direct and businesslike way, some favoring, some opposing; but there were no speeches "for the benefit of the public," no "playing to the galleries." The meeting might have been that of the directors of an ordinary company and the citizens' committee a committee of stockholders. This is what continually impresses one—the Commissioners constitute the city's board of directors.

The meetings are held usually once each week at 6 P. M., but special meetings may be called oftener. Every Commissioner is on hand. The meetings are usually short—from half an hour to an hour. The Mayor-President calls to order; he is addressed as "Mr. President." The minutes are read and a regular order of business followed, but rapidly; and as there has been more or less informal discussion beforehand, each man knows about what is coming up and what should be done. Everything is direct and concise. The Commissioners are all business men; the Mayor-President is a wholesale merchant of long experience; Austin, a real estate dealer; Norman, secretary and treasurer of a live stock concern, and formerly alderman; Lange, a wholesaler. Except the Mayor, they are expected to give about an hour a day to the city's business; the Mayor gives six hours a day, as required by law. They are supposed to *direct*, not to look after the details. Up in Houston they will tell you that it is better to have Commissioners who give *all* their time to the city—and so their Commissioners do; here in Galveston the citizens favor the other plan. "You can get so much abler men by not requiring all their time," said Mr. E. R. Cheesborough, a prominent citizen interested in government; "the first-class business man cannot afford to give all of his time to the city, even if you pay him four or five thousand a year. He can make three or four times as much in his business." The city of Galveston pays its Commissioners \$1,200 a year, and requires an hour a day of them; the Mayor-President, who gives six hours, receives \$2,000. Houston pays \$2,400 to the Commissioners and \$4,000 to the Mayor, for all of their time. Both plans work well.

THE RESULTS

Talk with the business men of Galveston, if you want to know how the Commission has worked. Read their financial statement for the past four years. Recall the continued re-election of the same Board. Look over the city—the clean streets, the artistic and well-kept depot, the good lighting, the pure water, the sea-wall, the raising of the whole city seventeen feet above the level of the Gulf. Not all this is due to the Commissioners; the women of the city helped to beautify the railway station—a union station, by the way; the United States Government and the State of Texas helped with the sea-wall and the grade-raising; but aside from that, the facts speak well for the new government. Without issuing additional bonds, and meanwhile paying all labor in cash, the following amounts have been raised and expended:

To pay outstanding scrip and interest on bonds issued by previous administration.....	\$169,924.32
Outstanding judgments paid and cancelled.....	21,086.49
Permanent improvements (rock paving, drainage, etc.)	279,638.75
Permanent improvements (water works, Fire Department, hospital, etc.).....	124,040.33
	<hr/> \$594,689.89*

This sum of over half a million dollars has been saved out of ordinary taxes, after paying all running expenses and without the issue of bonds or increase of the tax rate.

Business men tell you that the new government is honest and economical; the appearance of the city speaks for itself; the financial statement is significant. But more than this, the determined organization of citizens, formed back of the Commissioners, has re-elected them, in spite of a stiff fight put up by the old crowd. The City Club has had the co-operation of the best elements in the community, and has looked after the petitions, the campaign literature (what little there was), and the election of the men who have served the city so well. This has rendered it unnecessary for the Commissioners to get out and make a contest for their own re-election. And yet the City Club has never spent more than \$500, I am informed, in a single campaign.

REFERENCES

- Charter of the City of Galveston.
Circular Statement by the Board of Commissioners, Dec., 1907.
(For either of the above, address John D. Kelly, City Secretary, Galveston, Texas, enclosing six cents in stamps.)
Galveston City Budget, 1907-08.
Publications of the City Club, Galveston, Texas. E. R. Cheesborough, Sec.
Proceedings of the National Municipal League, Providence, R. I., Nov., 1907. ("The Galveston Plan," Prof. W. B. Munro.)
McClure's, Oct., 1906. Geo. Kibbe Turner. Reprint by Topeka City Club.
World To-Day, Sept., 1906. C. A. Williams.
The Nation, Oct. 18, 1906.
Independent, July 25, 1907. W. B. Slosson.
Arena, July, 1907. G. W. James.
Review of Reviews, Nov., 1907.

*See statement issued Dec., 1907, by the Board of Commissioners.

Collecting Water Rates

THE Water Registrar of the Clinton, Mass., Water Department, Peter J. Cannon, makes a statement in his annual report which may gain him the envy of other registrars, namely, that "all water rates for 1907 are collected. The rates were paid quite promptly except in a very few cases, and those came in on time on receipt of delinquent notices, so that there was no necessity for shutting off the water for non-payment."

Our inspection of numerous reports leads us to believe that it is the rule rather than the exception in a considerable percentage of cities that the rates are not collected as promptly as this, and many are even lost altogether. It may, therefore, be interesting to learn the plan not only adopted but apparently carried out in Clinton. This is described as follows:

There were sent out 185 "large usage" notices to takers whose readings showed an increased consumption over past months in case the same was thought to be a waste or a leak in fixtures. In many cases parties were notified by telephone. The department wants to keep down the waste and the consumer wants to keep down the water bill. In order to do this meters are read monthly if possible, and reading books checked. Where an increase is noticed the party is notified as above stated, but there is hardly a month's reading where there is not from 75 to 100 meters, or more sometimes, that cannot be read by the inspec-

tors. A leak in one of the unread services may go on for three months until the bill is rendered, when there is a kick on the amount and the meter must be wrong.

It is obvious that, had the meter been read, the increase noticed and the party notified, and the fixtures repaired or the careless waste stopped, at least two months' waste water would have been saved the department and the price of this waste water would have remained in the coffers of the consumer instead of being added to the receipts of the department.

This reduces the complaints of incorrect meters and overcharging, and refusals to settle bills on this account. Where bills are not paid after due notice fixed by the rules, the water is turned off at once and kept off until full payment is made. The rates are generally recognized as reasonably low.

The town is thoroughly metered, there being 1,502 meters in use, 1,410 of these being five-eighths-inch meters. Probably owing to the above described effort to reduce waste, the consumption for 1907 was 3,701,358 gallons less than for 1906, although 20 more services were in use, all dead ends were blown out once a month and the water tank was drawn off and cleaned.

MERIDIAN AND ITS WATER SUPPLY

MERIDIAN is the largest city in Mississippi, claiming a population of about 25,000. Several streets are paved with bitulithic and the city recently received bids for \$112,000 worth of additional paving. The streets are cleaned once a week. A system of sanitary sewers discharges the sewage into the river without purification.

A little less than two years ago the city purchased the existing water works from a private corporation, the superintendent for the old company, W. F. Wilcox, being retained by the city in the same capacity. The plant as purchased included a reservoir receiving the flow of two creeks, together with the ownership of a large part of their watershed; also a large part of another watershed, the flow from which was entirely undeveloped. There was a 10-inch main from the impounding reservoir to the pumping station, which it was realized did not have sufficient capacity, and the company had added a centrifugal pump in 1902 to augment the delivering power of the conduit about 50 per cent.

At the pumping plant the water was filtered and stored in a clear water basin of one million gallons capacity, which capacity was recognized to be insufficient. The superintendent believed that the lack of a sediment basin between the point of introducing the coagulant

and the filter, was a serious objection, one of the results of which was the necessity of using 10 per cent. of the water for washing the filters. The pumping engines had been in use for a number of years and were very uneconomical, using 75 per cent. more coal than would be necessary with modern high duty engines. The boilers were in such poor condition that the insurance company would not allow more than 90 pounds steam pressure to be carried.

Meridian has about 80 miles of streets, of which about 40 should be supplied with water. There were, however, only 17 miles of cast-iron pipe and three miles of one to two-inch wrought iron pipe in service when the city purchased the plant. The receipts last year from private service were \$46,000, and the city appropriated \$4,000, which is just half what it had been paying to the private company for fire protection. Of this income 38 per cent. was expended in improvements, 25 per cent. for interest on bonds, 34 per cent. for operation, the remaining 3 per cent. representing bills payable. The superintendent reported last fall that because of the years of litigation between the city and the company no considerable improvements had been made to the plant, and it had been greatly outgrown by the rapid increase in population; that larger mains and increased fire protection in the business district were a necessity and also the extension of the distribution system to cover a much larger territory. For this reason he asked that a bond issue for \$50,000 be voted, stating that if this be supplied the revenue from the present plant and from the additional mileage of the distribution system which would be added by the use of a part of this sum, would be sufficient to meet all operating expenses and repairs, pay interest on the bonds and meet all reasonable demands for extension and improvements; so that in twenty years the property would not only be fairly adequate for the needs of the city but would be practically free from debt.

The \$50,000 was voted and is now being used for extensions which include a 16-inch main to relieve the 10-inch, and a sediment basin at the purification plant.

Somerville Water Works Notes

THE annual report of the Water Commissioner of Somerville, Mass., for 1907 contains, among other interesting matter, the per capita consumption in all cities and towns in the Metropolitan water district for each month of that year. The average daily consumption for the year varied from 46 gallons in Milton to 157 in Boston, the average being 133. Of the eighteen places reported, seven had their maximum consumption in February and eleven in August, although each of them had peaks in the consumption curve at both of these periods. Taking the mean of the entire district, the maximum monthly consumption was about 19 per cent. greater than the yearly average.

By legislative act of 1907 all cities and towns in the Metropolitan water district are now required to equip with water meters all water services hereafter laid and to annually equip with meters 5 per cent. of the water



MERIDIAN WATER WORKS PLANT

services which were not metered on December 31, 1907. This means that in twenty years all services will be metered. Commissioner Merrill, however, recommends metering at a higher rate at Somerville, so that all services in that city will be metered within ten years.

New mains to the extent of 4,309 feet were laid during the year, the excavation for these being let by contract and the pipe and materials being furnished and pipe laying done by the Water Department. Six such contracts were let, of which the lineal feet of trench, price for earth excavation per lineal foot, and for rock excavation per cubic yard respectively, were as follows: 588, \$.20, . . . ; 207, \$.25, \$3.00; 506, \$.22, \$3.00; 281.5, \$.40, \$1.50; 352, \$.35, \$2.40; 767, \$.29, \$2.48.

During the year five new water posts were set for use by the street watering department in filling their carts, making seventy-eight of these now in the city. Apparently the experience here has been that these posts have demonstrated their value in preventing the damage done to fire hydrants by drivers of the water carts; and we believe that has been the general experience where they have been used.

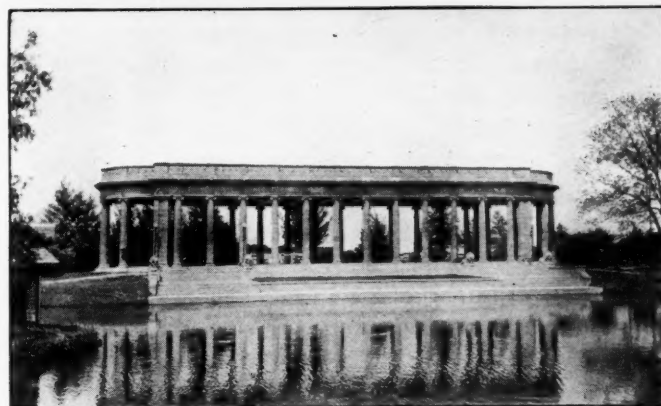
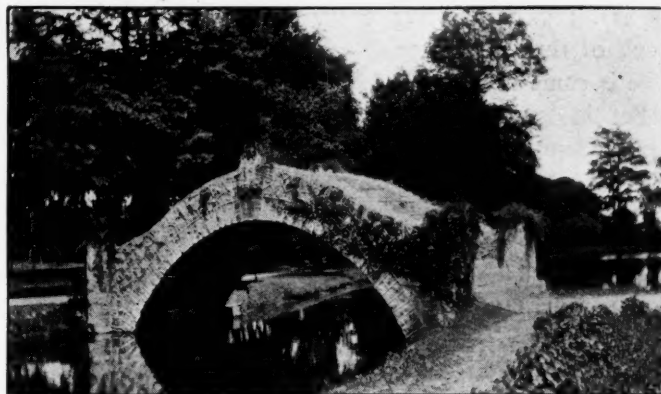
NEW ORLEANS STREETS AND BELT LINE

Editorial Correspondence

THE city of New Orleans, La., is required by law to devote 20 per cent. of its alimony to permanent public improvements, the law also allowing ten-year anticipations of this sum. Under this provision, the stated amounts for the years 1908-9-10 have already been used, and it is now proposed to anticipate still further to obtain money for street improvements following the completion of the water and sewer main construction.

There are already several miles of asphalt and some brick paving in the city, but the greater part of the paving has been done with large granite blocks, about twelve to fourteen inches square and ten inches thick, which were laid over one hundred years ago at a cost of about \$7 per square yard. These have become rounded off very much in use, an objection common to the smaller granite blocks more recently laid elsewhere, but the larger size of these makes the jolting effect upon traffic even more objectionable than with small blocks.

In some sections of the city the street names are given by imbedding in the cement sidewalks, at the street



ORNAMENTAL BRIDGE AND PERISTYLE, CITY PARK

corners, terra cotta letters blue or white in color. These are being substituted for the old tin signs which are being continually destroyed by boys. It was noticed that some of these terra cotta letters were broken and loosened and others had disappeared altogether.

The city has two large parks, City Park and Audubon Park, each with its separate Park Board. These are kept in excellent condition and seem to be thoroughly appreciated by the citizens. Suggestions for several of the attractive features of the park have been taken from the history of the city and its peculiar climate.

The streets in the business section are cleaned at night by machine sweepers, the same machines being used in the residence section in the daytime. Hvas and Austin sweepers are used in connection with sprinkling carts; also five Sanitary Flushing machines. During the daytime the business section is kept clean by hand patrol. Both street sweepings and garbage are collected in two-wheeled dump carts of one yard capacity, the city hiring the teams at the rate of \$3 per day, including the driver. The garbage is deposited on the scows and dumped into the river several miles below the city.

The city owns all the machines used in street cleaning and has just contracted for a machine which will collect the last windrow left by sweeping machines and deposit it in piles at the corners. The brooms of the machine sweepers are refilled by the department at its shop. The city owns 80 head of stock and employs 251 men in the Department of Public Works. Of the total of 700 miles of city streets, 250 are cleaned as above described.

The city owns and operates a belt railroad which taps every trunk railroad at the suburbs and reaches every



OLD DUELING OAK AND TOMB OF DUKE, CITY PARK

wharf, thus connecting every factory and wharf with each of the several roads entering the city. When this line is completed it will be a double track system twenty miles in length, extending along practically the entire river front east to Kentucky street, through this to the rear of the city and following along this and the western extremity to the point of beginning. Every wharf, freight depot and important industry will be reached by means of switches. It is proposed to deliver not only carloads, but broken carload lots to any of the departments or wharfs; and in doing this, to minimize the cost of transacting business, eliminate drayage as far as possible, and thus make it the cheapest city in the country for transacting business of this nature. This road will also open up to manufacturers sites in the rear of the city affording ample room for development, the road being used also for transporting dredge material from the river to the lowlands in the rear of the city for raising the same where they are now low and swampy. The Belt Line Commission contemplates many additional advantages to shippers of freight from and into New Orleans, among these being freer competition between the trunk lines and avoidance of freight congestion.

It is estimated that the cost of this road will be about \$1,500,000. There has so far been constructed ten miles of single track, eight miles of double track and four miles of sidings, etc. This has all been paid for out of the general fund of the city without any bond issue. Three engines are already in service. There has been a little friction with the railroads, but such differences have practically all been settled.

The Fire Department has in service 27 steamers, 8 hook and ladder trucks, 1 aerial truck, 13 double tank chemical engines and 1 water tower. There are 350 men in the department. The pipemen receive \$65 per month, engineers \$80, stokers \$70, captains \$80, two assistant chiefs \$150 and \$175 respectively, and the chief \$3,600 per year. The men have ten days' vacation in summer, with twenty-four hours off three times a month. An injured fireman receives full pay for one year. If sick, half pay for thirty days, and in addition \$1 per day from the relief fund. A department physician looks after all the men. In case of death a fireman's widow receives \$500 and a pension of \$15 per month, in addition to which each orphan receives \$6 per month until more than 14 years old. Men are relieved from service and receive a pension equal to half their pay when they become totally incapacitated, this being two-thirds pay if the incapacity results from injuries. Each member contributes 1 per cent. of his salary to the pension fund.

Damage from Wood Pavements

A NURSERYMAN in Bristol, England, has sued a tramway company to recover damages to his plants, alleged to have been caused by the fumes from creosote-prepared wooden blocks laid in 1906. The tramway company denied that the alleged damages were caused by the blocks, which they said were prepared in the usual way. On the findings of the jury, the Recorder entered judgment for the plaintiff at £40 (\$194.66), and this judgment was sustained by all the higher courts upon appeal.

CITY COMPTROLLER'S REPORTS

WE have recently examined a number of reports of City Comptrollers, from cities of various sizes and widely scattered geographically. These range all the way from a bare statement of sums received, amounts paid out and balances in the treasury, to a list, more or less completely classified, of every item received or paid. There are two standards for gauging a report of this kind; one that of the citizen endeavoring to learn the source of the city's income and what becomes of the expenditures. The other is that of the trained bookkeeper who can detect the possibilities which any given system presents for mistakes or concealed peculation. In the case of a small city the mere listing of itemized expenditures may be sufficient, since in a few minutes anyone could group these under any desired system of analysis. But when the city is larger and the items run into the thousands, this not only becomes too laborious but actually impossible to the average citizen. The report itself, therefore, should present such systematic grouping and summarizing and the system employed should be that which is most intelligible to the average citizen.

From this point of view none of the reports which we have examined surpass, and few if any equal, that of Atlantic City, N. J. Although the annual report contains but 114 pages and some inset tables, it would seem to be possible to obtain from it almost any information concerning the city's expenditures which could be desired. For instance, few City Engineers' reports contain such definite statements concerning the cost of sewer construction or of street paving.

In this report the receipts and disbursements are classified under fourteen different heads, viz: General Fund, Water Department, Water Improvement Fund, City Improvement or Boardwalk Fund, City Hall, City Park, Paving, Fire Department, Sidewalks, Board of Education, Board of Health, Drainage Bonds, Conduit Bonds, Michigan Avenue Lot Bonds. Under each of these headings the itemized expenditures and receipts are given, with the total of each.

Following this, revenue and expense are given, these being defined as follows:

The revenue account of Atlantic City, like that of any other municipality, is a statement of the resources anticipated or appropriated for current expenses. All of these resources may not be collected during the current year. This is especially true of revenues derived from the tax levy. Current taxes go to make up the revenue of the year, though they may not be collected during that period. In no city are all of the revenue collections concurrent with the expenses. At the close of any fiscal year the difference between the revenue and the expense accounts represents the surplus or deficit of that period. The delinquent taxes of preceding years are, of course, available for disbursement during the current year; otherwise there might be a deficit in cash, though not in revenue.

A statement of the expenses of Atlantic City, like that of the revenues, is a summary of all of the accounts of the city pertaining to the cost of operation or maintenance. The expenditures do not necessarily represent the expenses. The former refer to actual payment of cash; the latter to the costs or charges incurred during the year, some of which may not have been paid at the time the accounts are closed for the year. If the expenses exceed the expenditures or revenue, the difference represents the deficit of the year.

Like the receipts and disbursements, the revenues and expenses are classified according to the various departments.

CITY AUDITOR'S GENERAL BALANCE SHEET, OKLAHOMA CITY, OKLA.

ASSETS		LIABILITIES	
AVAILABLE ACCOUNTS:		CURRENT:	
Cash.....		Warrants outstanding.....	
Total Cash.....		Audited Vouchers.....	
		Interest accrued on bonded debt.....	
RECEIVABLE ACCOUNTS:			
Bills for Collection.....			
Items for Collection.....			
Taxes in Process of Collection.....			
Ac. of.....			
Miscellaneous.....			
Total Accounts Receivable.....			
Total Available Assets.....		Total Current Liabilities.....	
CONTINGENT:		CONTINGENT.....	
Total Contingent Assets.....		Excess of Available and Contingent Assets Over	
		Current and Contingent Liabilities.....	
TRUST FUNDS:		TRUST FUND LIABILITIES:	
Paving Bonds.....		Special Assessments—	
Cash with Treasurer: Paving Fund.....		Lateral Sewer.....	
Sidewalk Paving Fund.....		Sidewalk.....	
Lateral Sewer Paving Fund.....			
Bills for Collection.....			
In Hands of City Clerk: Grading.....			
Lateral Sewers.....			
In Hands of County Collector: Grading.....			
Lateral Sewers.....			
Total Trust Fund Assets.....		TRUST FUND ACCOUNTS:	
		Board of Education.....	
		Paving.....	
		Total Trust Fund Liabilities.....	
		Bonded Debt.....	
Not Available.....		Excess of Assets Not Available Over	
Total Assets.....		Bonded Debt.....	
		Total Liabilities.....	
Excess of Available and Contingent Assets Over Current and Contingent Liabilities			
Excess of Assets Not Available Over Bonded Debt			
Total Surplus			
PROOF:			
Surplus Account, Beginning of Fiscal Year 1907			
Revenues for Year Ending 1908			
Total.....			
Less Operating and Maintenance Expenditures for Year Ending		1908.....	
Difference, Being Surplus Account		1908.....	

GENERAL BALANCE SHEET, PORTSMOUTH, N. H.

CAPITAL ASSETS:		CAPITAL LIABILITIES:	
Water Works System.....		Funded Debt, Exhibit IX.....	
Real Estate, Exhibit VIII.....		Notes, Exhibit IX.....	
Personal Property, Exhibit VIII.....		Trusts, Exhibit XIII.....	
Sinking Fund Assets (par), Exhibit XII.....			
Sinking Fund Assets, Premium Account.....			
Trust Funds, Exhibit XIII.....			
Capital Deficit.....			
Total Capital Assets.....		Total Capital Liabilities.....	
CURRENT ASSETS:		CURRENT LIABILITIES:	
Revenue Fund—		Revenue Fund—Sundry Depts.	
Uncollected Taxes, Exhibit V.....		to cover outstanding coupons and	
Tax Sale Acct., Exhibit VI.....		accounts due, Exhibit II.....	
Cash, Munic. Acct., Exhibit I.....		Revenue Fund—Surplus,	
		Exhibit III.....	
WATER FUND:		WATER FUND:	
Uncollected rates and accounts.....		Accounts Due.....	
Cash, Exhibit IV.....		Water Fund, Surplus.....	

GENERAL BALANCE SHEET, ATLANTIC CITY, N. J.

DEBITS—	1906	1907	In-crease	De-crease	CREDITS—	1906	1907	In-crease	De-crease
CASH AND OTHER ASSETS					BONDS AND TEMPORARY LOANS				
CURRENT ASSETS:					ATLANTIC CITY BONDS:				
Cash on hand at close of year—					Boardwalk.....				
General Fund.....					City Park.....				
Water Department.....					City Hall.....				
Paving Bonds.....					Semi-Centennial.....				
Fire Department Bonds.....					Water.....				
Water Bonds.....					Crematory.....				
Board of Education.....					Paving—Pacific Avenue.....				
City Park Bonds.....					Paving—Atlantic Avenue.....				
Municipal Hospital Bonds.....					Paving—Tennessee and Man- sion Avenues.....				
Water Department Cashier.....					Paving—Miscellaneous.....				
					Public Library.....				
SINKING FUND—Bonds and Cash.....					Fire House.....				
					Fire Department.....				
CONTINGENT ASSETS:					Conduit.....				
Uncollected Current Taxes.....					Michigan Avenue Lot.....				
Delinquent Taxes.....					Sidewalk.....				
Interest on Delinquent Taxes.....					Municipal Hospital.....				
Delinquent Paving Assessm'ts.....					Drainage.....				
Uncollected Water Rates.....					School.....				
ACCOUNTS RECEIVABLE:					TEMPORARY LOANS:				
West Jersey and Seashore R.R.					Bills Payable.....				
Paving.....					Sinking Fund—Atlantic City				
Atlantic City and Suburban					Bonds.....				
Lighting Tax.....									
Atlantic City and Suburban									
Paving.....									
Atlantic City Railroad, Paving									
FIXED ASSETS:									
Water Works, including Real									
Estate.....									
City Properties, exc. Water									
Works:									
City Hall.....									
Public Schools.....									
Public Library.....									
Municipal Hospital.....									
Fire Department, excluding									
Call System.....									
Police Department, exclud- ing Call System.....									
Highway Department.....									
Grand Total.....									

RECAPITULATION

	1906	1907	Net In-crease	Net De-crease
Total Current Assets.....				
Total Sinking Fund.....				
Total Contingent Assets.....				
Total Accounts Receivable.....				
Total Fixed Assets.....				
Total Assets.....				
Total Liabilities.....				
Excess of Assets over Liabilities.....				

Following these are various "Exhibits," some of these being: Current taxes, collected and uncollected; delinquent taxes, collected and uncollected; cost, cost of duplication and present value of the water works; value of fire house and apparatus; of highway department apparatus; of school houses, etc.; funded debt; bond sales during the past seven years; original cost and depreciation of the city's paving; city statistics, etc.

A general balance sheet for the city is given herewith in detail, except that the sums themselves are omitted. For the purpose of comparison, two other forms of balance sheets are given, each of which has features of merit, and may be best adapted to local conditions. The Auditor of Portsmouth, N. H., in his annual report, states that in January, 1907, he found the accounting system in a chaos, with no books of record worthy of the name. An expert accountant recommended a system, which has been adopted and is being gradually put into complete use.

The approximate population of Atlantic City is 38,000 in winter and 250,000 transients are added in summer.

The population of Portsmouth is approximately 12,000, and that of Oklahoma City 40,000.

Comptroller A. M. Heston, of Atlantic City, defines the purpose of the balance sheet as follows:

The ordinary balance sheet is a statement of the debit balances on one side of the books, at the close of the year, and of the credit balances on the other side, after all the revenue items have been properly charged. In the case of a municipality, the principal asset is not the cash on hand, nor the public improvements, nor the taxes assessed, but the power to contract debts and collect taxes. In other words, the city's real asset is its borrowing capacity, which asset does not appear on the books. Such an exhibit, however, should accompany the city's financial statement, to show how far it can go and how far it has gone in the creation of debt and the liquidation of indebtedness. Atlantic City's present limitation of indebtedness is \$7,614,992, representing 15 per cent. of its taxables, against which there is placed the bonded debt already created, less the sinking fund for the redemption of the bonds; thus:

Borrowing capacity, bonds not exceeding 15 per cent. of the taxables.....	\$7,614,992.00
Maturities, including School Bonds.....	\$3,904,000.00
Less Sinking Fund.....	817,692.00
	3,086,308.00
Net borrowing capacity.....	\$3,528,684.00

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Editorial Department

A. PRESCOTT FOLWELL, Editor

J. H. DONNELLY, F. E. PUFFER, Assistant Editors

F. S. SLY, Field Editor

Business Department

H. M. SWETLAND, President

J. T. MORRIS, Treasurer M. J. SWETLAND, Secretary

G. E. SLY, Advertising Manager

M. C. ROBBINS, Western Manager, 1664 Monadnock Block, Chicago

Telephone, 6723 Gramercy, New York

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To insure the accuracy of our mailing lists, subscribers are requested to notify us of any change of address, giving both the old and new addresses.

It is further requested that our Subscription Department be notified if copies are not received promptly.

Readers are invited to contribute to the MUNICIPAL JOURNAL AND ENGINEER, either in the form of special articles or of letters discussing matters of current interest.

It is also desired that the facilities furnished by the reference library in this office should be widely known and freely used by those interested in municipal affairs. Visitors will be welcomed and provided with conveniences for search, and inquiries by mail will be promptly dealt with.

REMOVAL NOTICE

The office of the Municipal Journal and Engineer on July 1 will be removed to the Thirty-ninth Street Building, 239 West Thirty-ninth street, New York City.

JUNE 3, 1908.

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The People's Right to Information

THE Good Government Association of Boston has recently published a remarkable statement concerning the refusal of city officials to furnish it with information. The association last year began an investigation of the sewerage department. At the outset an agent of this body of citizens was refused all information by the Sewer Department concerning the names of any contracts then under way or the names of the contractors therefor; moreover, the head of the department formally and officially refused this agent any information concerning the cost of any sewer work done since 1899.

According to the City Ordinances, such information cannot be refused except by order of the Mayor. Unfortunately, the association apparently did not apply directly to him in this matter. But whosoever the responsibility, and regardless of any friction which may have previously existed between the department and this association, or ideas which the former entertained of the use which would probably be made of it, the withholding of information concerning public work cannot be too strongly condemned.

The advantages of requiring publicity of public service corporation finances and the right to demand it are now generally recognized, but both are vastly greater in the case of municipal affairs, and should be insisted upon.

Dust Laying Experiments

In the annual report of the Commissioner of Public Roads of New Jersey for 1907 appears an article on "Road Coatings and Dust Preventatives," by John J. Albertson, County Engineer of Camden, in which, after speaking of the necessity for such preventatives in his county, he states that "Sand cushion, gravel surfacing, modified forms of salt, oil, and tar, have been tried, with varying degrees of success." The Road Committee, with its Engineer, visited some tarvia-coated roads in Pennsylvania, and were led to believe that an experiment with this material would be worth a trial, particularly along the White Horse turnpike road, the famous automobile route between Philadelphia and Atlantic City.

We might have bought the crude coal tar and treated it ourselves by driving off the water and ammonia with heat. The cost of tarvia was but little more, so we took the product claimed to be especially prepared for the purpose. We applied it in various places under different conditions and with varying degrees of success. On a stone bed, fourteen feet wide, we used sixty barrels per mile.

The tarvia cost six and one-fourth cents per gallon and two-fifths of a cent per gallon for freight. We used one hundred tons of trap rock screenings per mile as an absorbent for the tarvia, which cost about \$175, and \$80 for labor, or a total cost of about \$450 per mile. This seems like a heavy outlay, but where conditions were favorable, and road in good order, resurfaced and well crowned, the results so far have been very satisfactory. There has been no wear of the stone. Wagons and carriages move noiselessly as over a first-class asphalt pavement, and with about the same amount of damage to the road surface. There is no abrasion, and but little dust.

We applied the tarvia hot, using a furnace or kettle built for the purpose on wheels. We first sent a gang of men ahead with stable brooms and swept the stones as clean as possible, then dragged the kettle behind a wagon. The kettle was provided with a gate valve and a short piece of hose, through which the hot tarvia was distributed over the clean stone surface, then brushed out evenly with stable brooms. We then applied the screenings, to make an absorbent. In a few hours the road was ready for use. We made our first experiments in last May and continued them during the summer, using several

carloads of tarvia. For those wishing to use tarvia, we would recommend, first, to have the road in good order, free from dust, and well crowned. Under all other conditions our experiments were unsatisfactory. I would apply tarvia on a hot, dry day. Use plenty of good trap rock screenings, and results promise to be most gratifying. Rain and windstorms have no effect on roads so treated.

We had previously made some experiments in 1905 with crude petroleum, and the objections about balanced the good results. In August, 1906, we applied one carload of heavy oil from Texas, at twelve cents per gallon. Counting the labor of applying the oil, it cost us about \$125 per mile, on a fourteen-foot-wide stone bed. As a dust absorber it acted like magic, but its results were not lasting. It is a question in the minds of some whether we cannot make more frequent applications of oil and attain almost as good results, and with a more moderate expenditure than is required with tarvia.

Typhoid Rates in New York State

THE April Bulletin of the New York State Department of Health presents an interesting table showing the mortality from typhoid fever for the past ten years in the cities of that state, these being grouped according to the source of their water supply. Five cities are reported as using unfiltered lake water, and the death rate per 100,000 in 1907 ranged from 6 to 71.8, the average being 26.8. Eight cities use unfiltered river water, and the death rate in these in 1907 ranged from 17.0 to 126.0, averaging 57.1. Seven use filtered river water and the death rate in these ranged from 18.2 to 112, averaging 42.0. Eight use well or spring water and the death rate ranged from 0 (in two cases) to 69.0, averaging 20.2. Eleven use water from streams and reservoirs and the average death rate in these ranged from 0 to 51.0, averaging 21.4. Seven use filtered surface water and the death rate ranged from 7.5 to 37.7, averaging 17.3.

The effect of improvement of the water supply in reducing the typhoid death rate in the case of ten cities of the state was shown in the following table:

Place	Nature of improvement	Average before improvement	Average after improvement	Per cent. reduction in death rate
1. Albany	Slow sand filters	88.8	23.7	73.0
2. Binghamton	Gravity mechanical filters	39.3	11.7	72.2
3. Elmira	Gravity mechanical filters	54.9	41.5	24.4
4. Hornell	Horizontal pressure mechanical filters	42.2	24.7	41.4
5. Hudson	Purer source and modernized filter plant	64.3	31.9	50.5
6. Ithaca	Part from wells and springs, part through gravity mechanical filters	67.2	14.6	78.3
7. Rensselaer	Gravity mechanical filters	95.5	54.4	43.0
8. Schenectady	Wells or infiltration galleries	25.0	14.4	42.6
9. Troy	All from surface gravity supply instead of part from Hudson river as before	58.2	31.0	42.6
10. Watertown	Gravity mechanical filters	94.7	36.9	61.8

In the above table the changes made, by which the supply was improved, are briefly indicated. It is seen that these changes effected a reduction in the typhoid death rate of from 24.4 per cent. to 78.3 per cent, the average reduction being 53.4 per cent.

The general improvement in conditions producing typhoid fever is indicated by a comparison for the average death rate for each group in 1907 as compared with the average for the same group for the ten years since 1897. These averages are as follows:

Cities using unfiltered lake water, ten-year average 27.6, 1907 average 26.8.

Cities using unfiltered river water, ten-year average 57.7, 1907 average 57.1.

Cities using filtered water throughout the ten years, ten-year average 45.8, 1907 average 45.1.

Cities having introduced filtered water since 1902, ten-year average 59.7, 1907 average 37.8.

Cities using well or spring water throughout the ten-year period, ten-year average 28.5, 1907 average 30.6. (The increase was due to an epidemic in Corning.)

Cities changing to well or spring water since 1902, ten-year average 36.3, 1907 average 4.35.

Cities using water from streams and reservoirs throughout the ten-year period, ten-year average 25.4, 1907 average 21.0.

Cities using filtered surface water throughout the ten-year period, ten-year average 22.7, 1907 average 18.6.

Troy discontinued the partial use of the Hudson river in 1906 and used small lakes and streams only, her rate by this means being reduced from 52.7 for the ten-year period to 25.8 in 1907. Hudson, which used filtered Hudson river water prior to 1905, changed to filtered water from small streams at that date, thus reducing her rate from 64.6 for the ten-year period to 9.4 for 1907.

It is seen that cities which made no changes in their source of supply or method of purification during this ten-year period show some improvement, but this is very slight except in the case of those using water from streams and reservoirs, either filtered or unfiltered. It has frequently been stated that the reduction in typhoid fever rates cannot be attributed with certainty to improvements in the water supply, since conditions in general sanitation in all of our cities have also been improved and the reduction in typhoid rates may with equal probability be attributed to these. The above figures cover only a few cities, it is true, but they seem to indicate that where there has been no change in the water supply the reduction in typhoid death rates has been very slight; while in cities where the water supply has been improved this reduction has been very noticeable.

Letter to Septic Tank Users

MUNICIPAL JOURNAL AND ENGINEER,

New York City.

GENTLEMEN—In the case of the Cameron Septic Tank Company vs. the Village of Saratoga Springs, and others, upon the result of which depended the validity of the Cameron patent covering the "Septic Process," a recent decision of the United States Circuit Court of Appeals sustained the process claims, and a rehearing in that court was promptly denied; later, the Village of Saratoga Springs, supported by a combination of infringing municipalities, endeavored to have the case reviewed by the Supreme Court of the United States, and an application was filed petitioning for a writ of certiorari, which was denied, the following week, thereby affirming the decision of the U. S. Circuit Court of Appeals.

Desiring to comply with the wishes of its many clients, the Cameron Septic Tank Company offers the following alternatives covering prospective installations involving the septic process:

1. To design sewage disposal plants and take contracts for complete construction.
2. To furnish plans and specifications, and license the use of plants constructed thereunder.
3. To license the construction and use of plants designed by other engineers.

Before the validity of the Cameron patents had been established by the courts, the Cameron Septic Tank Company refrained from any interference with the operation of unlicensed plants, but now that these patents have been so completely sustained by the recent action of the Supreme Court of the United States, the same respect and consideration will be expected for them as has been accorded by the highest courts. An invitation is therefore extended to municipalities and others owning infringing plants, to communicate with the Cameron Septic Tank Company for the purpose of effecting settlements, which may be secured on very reasonable terms, provided useless litigation is avoided. Very truly yours,

CAMERON SEPTIC TANK COMPANY.

Chicago, May 27, 1908.

MUNICIPAL BOND SALES DURING APRIL

NAME OF CITY	Estimated Population	ACTUAL VALUE OF ASSESSABLE PROPERTY (estimated)		Ratio of assessed to actual value	Bonded Debt	Sinking Fund	NET BONDED DEBT		Tax Rate per \$1,000 Ass'd Value	BOND SALES, APRIL, 1908				Basis
		Total	Per Capita				Total	Per Capita		Term of Years	Amount	Interest	Price	
Pasadena, Cal.	30,000	\$70,000,000	\$233	.50	\$551,800		\$551,800	\$18	\$12	1-40 ser.	\$100,000	4 1/2% s.a.	Par	.....
Santa Barbara, Cal.										1-40 ser.	36,000	4 1/2%	\$100.291	4.478
Bridgeport, Conn.	100,000	68,094,871	681	1.00	1,480,358	\$405,285	1,075,073	10.75	15.50		100,000	4 1/2%	100.75	.....
Huntington, Conn.										20	100,000	4 1/2% s.a.	98.50	4.11
New Britain, Conn.	43,000	36,000,000	310	.75	2,305,000	170,000	2,135,000	49	16.50	30	30,000	4 1/2% s.a.	100.29	4.148
										30	15,000	4 1/2% s.a.	100.29	4.148
Blue Ridge, Ga.										30	30,000	5 1/2% s.a.	Par	.....
Dublin, Ga.										29	65,000	5 1/2% s.a.	101.50	4.902
Bedford, Ind.	10,000	2,700,000	270	.50	39,000	1,665	37,335	3	11	10	13,808	6 1/2% s.a.	Par	.....
Washington, Ind.										5 1/2	6,000	5 1/2%	102.33	4.495
Portland, Me.										19	42,000	4 1/2%	Par	.....
Athol, Mass.	8,000	4,230,048	528	.....	420,000	24,000	396,000	49	.....	30	24,000	.....	101.817	.....
Attleboro, Mass.										2-26 ser.	50,000	4 1/2% s.a.	101.57	3.854
Framingham, Mass.										12 avg.	96,000	4 1/2% s.a.	100.44	3.905
C't B'r'ngton, Mass.										10 1/2 avg.	66,500	4 1/2% s.a.	101.80	3.76
Haverhill, Mass.	40,818	26,964,866	661	1.00	1,757,000	535,644	1,221,356	29.93	15.64	10	74,000	4 1/2% s.a.	100.55	3.932
Malden, Mass.										25	16,000	4 1/2%	102.049	3.871
										25	9,000	4 1/2%	Par	.....
Newburyport, Mass.	14,673	11,270,311	767	.....	827,000	229,875	597,125	40	.....	17 avg.	75,000	4 1/2% a.	101.034	3.916
Worcester, Mass.	147,000	124,747,588	849	1.00	8,518,625	3,469,802	5,048,823	34.40	16	10	87,000	4 1/2%	102.00	3.758
Bay City, Mich.	50,000	15,500,000	310	.75	1,000,000				21.80	4 1/2 avg.	125,000	5 1/2% s.a.	100.261	4.934
Milan, Mich.										24 1-6 avg.	30,000	4 1/2% a.	Par	.....
Springfield, Minn.										12 5-6 avg.	25,000	5 1/2% a.	101.27	4.866
Amory, Miss.										20	2,000	6 1/2% s.a.	Par	.....
Columbia, Miss.	2,000	1,250,000	625	.65	30,000		30,000	15	11	25	50,000	6 1/2%	101.00	5.925
Hazelhurst, Miss.										20	25,000	.....	102.50	.....
Meridian, Miss.										30	100,000	5 1/2% s.a.	100.77	5.48
										1-10 ser.	150,000	6 1/2% s.a.	100.77	5.48
Oxford, Miss.	2,500	2,000,000	800	.58	68,800		68,800	27	11.50	14 1/2 avg.	15,000	6 1/2% a.	103.33	5.669
Lincoln, Neb.	55,000	35,250,000	641	.20	1,224,100		1,224,100	22.26	39.25	1-10 ser.	47,010	5 1/2%	Par	.....
York, Neb.										20	27,000	.....	Par	.....
Reno, Nev.										14 1-6 avg.	15,000	5 1/2% s.a.	102.10	4.793
Roswell, N. M.										20	170,000	5 1/2% s.a.	Par	.....
Albany, N. Y.	98,500	76,351,165	775	.....	3,361,151	1,576,114	1,785,037	18	19.40	1-20 ser.	200,000	4 1/2% s.a.	Par	.....
										1-10 ser.	128,000	4 1/2% s.a.	Par	.....
Ithaca, N. Y.	15,000	15,000,000	1,000	.55	574,000		574,000	38.27	15.80	5-20 opt.	31,000	4 1/2%	100.08	4.481
Mt. Vernon, N. Y.	30,000	35,560,000	1,185	.80	2,278,300	613	2,277,687	75.92	20.70	38 1/2 avg.	95,000	4 1/2% s.a.	105.507	4.209
No. Hemp't'd, N. Y.										0	40,000	5 1/2% s.a.	102.219	4.573
Poughkeepsie, N. Y.	26,000	20,000,000	770	.65	1,585,000		1,585,000	60.96	26.50	2-26 ser.	25,000	4 1/2% s.a.	100.521	4.449
Schenectady, N. Y.	75,000	50,000,000	667	.70	2,603,000	302,920	2,300,080	31.47	18.40	20	63,000	4 1/2% s.a.	104.42	4.17
										1-20 ser.	180,000	4 1/2% s.a.	103.28	4.112
Troy, N. Y.	76,000	54,250,172	714	1.00	3,541,679	85,779	3,455,900	45.47	17.66	1-2 ser.	32,000	5 1/2% s.a.	100.45	4.685
										6 mos.	60,000	5 1/2%	100.012	4.976
Tuckahoe, N. Y.	2,000	1,250,000	625	.33	81,000		81,000	45.50	9.28	6 mos.	40,000	5 1/2%	Par	.....
										5-16 ser.	6,000	4.75%	100.166	4.727
										5-10 ser.	3,000	4.75%	100.166	4.727
Warsaw, N. Y.										1 1/2 avg.	3,000	3 1/2%	Par	.....
Yonkers, N. Y.	68,000	60,019,750	883	.....	5,018,682	299,600	4,719,082	69.40	24.48	1-20 ser.	100,000	4 1/2% s.a.	103.197	4.122
Atlantic City, N. J.										19 1/2	120,000	4 1/2% s.a.	100.324	4.475
										29 1/2	35,000	4 1/2% s.a.	100.434	4.473
Montclair, N. J.										.....	104,000	.....	Par	.....
Orange, N. J.	27,500	25,000,000	909	.87	2,015,755.78	290,448.43	1,725,307.35	62	12.44	30	110,000	4 1/2% s.a.	103.91	4.267
Paterson, N. J.										20	100,000	4 1/2% s.a.	101.817	4.362
Maxton, N. C.										30	50,000	6 1/2%	103.50	5.76
Akron, O.	50,000	40,000,000	800	.75	1,280,995		1,280,995	25.62	32	1-5 ser.	30,000	5 1/2% a.	101.50	4.46
Athens, O.										55-6 avg.	15,100	5 1/2% s.a.	103.00	4.409
Barnesville, O.	5,000	3,000,000	600	.49	117,211	5,000	112,211	22	30	4 1/2 avg.	125,000	5 1/2% a.	100.261	4.934
										3	600	5 1/2%	100.34	4.386
Canton, O.	45,000	60,000,000	1,333	.25	306,000		306,000	68	32	3 1/2 avg.	7,600	4 1/2% s.a.	100.34	4.386
										3 avg.	14,100	4 1/2% s.a.	100.34	4.386
										31-6 avg.	2,500	4 1/2% s.a.	100.34	4.386
										5	2,400	4 1/2% s.a.	100.34	4.386
Delhi, O.										1-10 ser.	1,475	5 1/2% s.a.	103.452	4.289
E. Cleveland, O.	7,000	12,000,000	1,714	.30	300,000	15,000	285,000	40.71	29.90	2 1/2 avg.	12,600	5 1/2% s.a.	100.42	4.92
Elmore, O.	1,200	1,072,000	893	.25	21,000		21,000	17	12	4-18 ser.	15,000	5 1/2% s.a.	106.10	4.297
Hamilton, O.	30,000	22,000,000	733	.50	1,064,505	54,684	1,009,821	33.66	.....	19 avg.	50,708	4 1/2% s.a.	101.63	3.877
Marion, O.	20,000	10,663,500	533	.66	599,013		599,013	25	15	5 avg.	7,500	4 1/2% s.a.	101.143	4.243
										4 1/2 avg.	71,500	4 1/2% s.a.	Par	.....
Marysville, O.										10 1/2 avg.	9,000	5 1/2%	103.88	4.831
Newark, O.										13 1/2 avg.	85,000	4 1/2% s.a.	104.15	4.102
Norwood, O.	15,000	8,515,270	567	.60	880,672.50	65,819,790	81,485.71	54	13.84	25	6,000	4 1/2%	106.78	4.065
										1-10 ser.	29,923	4 1/2%	101.17	4.259
Paulding, O.										10	4,400	5 1/2% s.a.	105.113	4.363
Payne, O.										10	4,400	5 1/2%	105.113	4.363
Portsmouth, O.										7 1/2 avg.	5,500	4 1/2% s.a.	100.327	3.948
										10-12 ser.	35,000	4 1/2% s.a.	Par	.....
Richwood, O.										2-11 ser.	62,000	4 1/2% s.a.	101.074	4.312
St. Bernard, O.	4,500	4,500,000	1,000	.64	200,106	32,870	167,236	37	10.12	30	4,000	4 1/2% s.a.	107.76	4.051
St. Marys, O.	6,500	5,473,320	842	.25	327,770	14,762	313,008	48	.....	10	30,000	5 1/2%	105.166	4.357
Springfield, O.	48,000	35,000,000	729	.20	1,014,827		1,014,827	21.14	27.30	21 1/2 avg.	25,000	4 1/2% s.a.	107.39	3.985
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NEWS OF THE MUNICIPALITIES

Divers Subjects of General Interest and Their Treatment by City Councils and Officials—Streets, Water Works, Lighting and Sanitary Matters—Police and Fire Items—Government and Finance

ROADS AND PAVEMENTS

Changes in New York Road Laws

Albany, N. Y.—Radical changes in the administration of the highway system of the State will be made January 1, 1909, by the new law signed by Governor Hughes. Jurisdiction over construction and maintenance will be transferred from the State Engineer to the State Highway Commission. Another change is the abolition of the "labor system" of road work and the substitution of the "money system." The law provides that one of the Commissioners must be a practical civil engineer, who has had actual experience in the construction of highways and bridges. Aside from the administrative power, the new Commission will have authority to regulate the width of tires and prohibit the use of armored tires on automobiles. There will be four distinct classes of highways under the new law: trunk highways, connecting large cities and built by the State; county highways, built at the joint expense of the State, county and town; town highways, to be built by the State, and the town and local roads, built entirely by the town.

Connecticut Leads in Good Roads

Hartford, Conn.—State Highway Commissioner James H. Macdonald will spend a quarter of the annual appropriation of \$1,000,000 on the construction of fourteen trunk roads, four of which will cross the State east and west and ten will cross it from north to south. These will form a network covering 130 of the 168 towns of Connecticut and serve a population of 851,000 of the State's million people. The trunk roads will be 1,032 miles in length. The old Boston Turnpike is the key of the system, runs along the shore of Long Island Sound, furnishing a drive of 120 miles from Portchester, N. Y., to Westerly, R. I. The ten north and south roads start at intervals from the turnpike. Connecticut still leads as a State in the good roads movement, appropriating by far the largest amount of money per capita of any State.

To Facilitate Paving Procedure

Memphis, Tenn.—Mayor James H. Malone has written a letter to J. H. Weatherford, City Engineer, giving instructions as to the method of handling petitions for street paving under the front foot plan. Citizens contemplating improvements on their streets are invited to visit the office of the City Engineer. A representative committee going by appointment will receive instructions as to the kind of street which will be acceptable to the city. If there is a reasonable assurance that the petition will be carried through in a satisfactory way, the City Engineer will have a petition drawn up in proper form and will furnish the committee with a plat of owners of record. When the petition has been signed with what purports to be 60 per cent. of the owners, it will be examined, and, if verified, will be sent to the City Council with an estimate of the cost of this work.

To Stop Waste Through Useless Petitions

Seattle, Wash.—Sixty thousand dollars a year has been squandered in the last five years on useless work of fixing grades and surveying for local improvements that are never made, according to estimates of city officials. To prevent future waste, Frank P. Mullen, Chairman of the Street Committee, has decided to approve no more local improvement ordinances unless it is clearly demonstrated that the work will be started immediately. For years it has been the custom to allow Councilmen to have declaratory resolutions adopted without question, forcing the Engineer's office to devote much time to making the necessary surveys.

Mayor Opposes Bond Issue for Macadamizing

Plainfield, N. J.—In accordance with his declared intention, Mayor Fisk has vetoed a number of ordinances for macadamizing thoroughfares. The Mayor is opposed to the issue of bonds at this time, especially so for street improvements which, like macadam, he considers are not of a permanent character. He does not object to the use of macadam wherever the property owners are willing to pay cash for it.

French System of Road Maintenance Urged

Trenton, N. J.—In his annual report for 1907, former Road Commissioner Hutchinson of New Jersey expressed the desire that the French system of caring for roads be adopted in New Jersey. Under this plan, a man with a team is assigned to a section of the road to which he gives his entire time during at least nine months of the year. The cost of repairs for 1,300 miles of State roads has varied from \$300 to \$700 a mile. Even under the economical French system, Mr. Hutchinson figures that the repairs will cost \$600,000 a year. About \$82,000 of this amount comes from automobile fees.

SEWERAGE AND SANITATION

Bradford to Prepare for Sewage Disposal

Bradford, Pa.—In granting a permit for the Fisher avenue sewer, State Health Commissioner Dixon takes the opportunity to comment on Bradford's sewerage system. He says that in accordance with the policy of cooperation adopted by New York and Pennsylvania for rivers' purification, it will be necessary for Bradford to build a disposal plant by 1911. By May 1, 1909, the city must prepare a comprehensive plan for a sanitary sewer system for the entire developed territory and for a disposal plant and submit them to the State Commissioner for approval. Incidentally, Mr. Dixon says it is fortunate that all extensions since 1905 are separate sewers or the money might have been wasted.

Health and Building Officials Cooperate

Seattle, Wash.—City Superintendent of Buildings F. W. Grant and Health Commissioner Dr. J. E. Crichton have reached an agreement to improve sanitary conditions. Hereafter all applications for building permits shall be referred to Dr. Crichton upon the sanitation precautions advisable in such buildings. One of the first evidences of the agreement was the condemnation of the old Turner Hall, which was used as a lodging house. There were over 200 beds in the building and the air space was entirely inadequate.

To Isolate Consumptive Patients

Paterson, N. J.—The Board of Health has adopted a resolution presented by Dr. John L. Seal, declaring that, whereas, the Board has declared pulmonary phthisis to be a dangerous communicable disease, it is the Board's duty to protect the public by preparing a hospital for patients. Accordingly, a committee was appointed to see what additions or alterations would have to be made to the isolation hospital to prepare it for the care of consumptive patients. The Board has \$5,000 which it can use.

Railroad Endeavors to Eliminate Black Smoke

Port Jervis, N. Y.—In compliance with requests made by city authorities, officials of the Erie railroad have posted an order to the effect that, in consequence of complaints made of the large amount of black smoke emitted from engines in the Port Jervis yards, engineers and firemen are specially requested to see that everything is done to prevent making black smoke. The notice states that the matter will be watched very carefully and reports made of every engine crew that disobeys the instructions.

Mosquito Crusade on Long Island

Flushing, N. Y.—Plans were made at a meeting of a committee of the Flushing Association to have the meadows and lowland around Flushing drained to rid the neighborhood, as far as possible, of mosquitoes. The most difficult task is obtaining the names of the owners of the meadows, in order to have served the Board of Health orders directing that the land be drained. If sufficient time elapses and no work is done by the owners, the Board of Health will be asked to take a hand. Ditches will be dug similar to those in the meadows of Little Neck Bay, and the hollow places will drain into the ditches.

Stray Dogs Cause Rabies

New York, N. Y.—Dr. Ira Van Gieson, the Health Department expert who has charge of the Pasteur treatment bureau, has stated two reasons for the prevalence of rabies in New York, as well as in the United States generally. One is that there are many dogs imported from Europe, where the disease is much more common than in this country. The other reason is that the number of stray dogs, which act as carriers of the disease, is constantly on the increase in New York. Rid the city of stray dogs, and the disease will disappear, except for the imported cases, is the conclusion of the expert.

Cooperation of Mayors Regarding Tuberculosis

Salt Lake City, Utah.—A circular letter has been prepared by the State Board of Health, addressed to every Mayor in the State, requesting aid in arousing interest in the work of the International Congress on Tuberculosis, to be held in Washington, D. C., in the fall. The wish is expressed that the Mayors of Utah take an active part in the work and secure all possible publicity for the discussions of the preventive measures that may be proposed. It is further requested that every Mayor should appoint a committee of three or more persons, including himself as ex-officio member, to whom will be referred items of information concerning the Congress.

Villages Cooperate in Caring for Sewage

Tuckahoe, N. Y.—President Bacon is in favor of an interchange of sewerage facilities with the village of Bronxville, and plans for the proposed scheme of drainage have been forwarded to the State Health authorities at Albany. The topography of the land is such that it would be very difficult and expensive for each village to take care of all its sewage. It is proposed that Tuckahoe take care of that part of the system draining north of Bronxville, while the latter village take care of that draining south.

WATER SUPPLY

Publicity to Promote Bonding Measures

Baltimore, Md.—At the request of Mayor J. Barry Mahool, data are being collected by the Water Board and Subway Commission for the enlightenment of the public with regard to the need of passing the bonding measures. Attention is being called to the fact that with the present facilities there are dangers of famine and that the present supply is becoming rapidly polluted. On the other hand, the new project will supply pure water for a city of one million inhabitants from the watershed of the Gunpowder river. To convince the public of the necessity of passing the subway bonding bill, they are being reminded of the great fire, when the work of firemen was seriously hampered by the network of overhead wires.

Indiana Health Officers Inspect Filter Plant

Indianapolis, Ind.—In line with a movement to establish water filtration plants in a number of cities of Indiana, about twenty-five health officers from various cities and towns of the State visited Indianapolis to make an inspection of the filtration plant of the Indianapolis Water Company. A number of plants will be built in the State modeled after the Indianapolis plant. The work of inspection of water supplies would be much simplified if private wells were closed and the public supplies drawn wholly from filtration plants.

Form for New Jersey Water Grants

Trenton, N. J.—The State Water Supply Commission, in granting permission to the Buckhorn Water Company to furnish water to the town of Belvidere, adopted a form of agreement designed for general use. The grant is for thirty years. At the end of that period the franchise may be renewed for twenty years, or the plant may be purchased by the municipality. If purchased, no allowance is to be made for the right to divert water, but only for the actual value of the plant. The municipality is also given the privilege of purchasing the plant at any time during the twenty-year period, after giving the company one year's notice of its intentions. In case a price cannot be agreed on, it is to be fixed by arbitrators, one appointed by the company, the municipality, and a Justice of the Supreme Court.

Extraordinary Efforts to Collect Water Rates

Jersey City, N. J.—Officials of the Water Department are endeavoring to collect a quarter of a million dollars in unpaid water rates in order to make a payment to the Jersey City Water Supply Company, as recently ordered by the Court of Chancery. Part of the \$518,000 due is on hand, and to collect the balance the Registrar's office is being kept open until 9 p.m. and every effort is being made to induce delinquents to pay.

Meter Rates Cannot Be Collected

Newburgh, N. Y.—The Board of Water Commissioners, after installing meters from time to time during the past two years, has decided not to attempt to collect meter rents and it has, accordingly, notified consumers that they will be put on the assessment rolls at flat rates. The reason for the change is that the Commissioners were afraid that the collection of rents from meter readings could not be enforced. According to the city charter, the Commissioners may fix water rates with the assent of City Council. The City Council has never assented to the meter rates. Bills were recently passed by the Legislature giving the Commissioners full authority, but Council failed to approve them and they did not become laws.

Municipal Water Works Voted Down

Seneca Falls.—The proposition to bond the village to build a municipal water works was defeated by a vote of 293 to 281. One-seventh of the votes cast were deposited by women and they are credited with the defeat of the measure. The fear of bonding the city and the possibility of an increase of taxes are given as the cause for the negative vote. Citizens do not seem to have been convinced that the water works would be profitable and that rates would take care of the debt.

STREET LIGHTING AND ELECTRIC POWER

City Hall Lighting Plant Given Try-out

Newark, N. J.—For the first time since its installation the new City Hall electric lighting plant was given a test recently. The plant is practically completed and it was the opinion of those who watched the operations that the test was successful. The experiment was held under the direction of Chairman McGowan, of the Aldermanic Municipal Lighting Committee; Samuel P. Waldron, of E. M. Waldron & Co., which installed the plant, and representatives of the Watts-Campbell Company and the Sprague Electric Company. There are in the neighborhood of 8,000 lights in the City Hall, and about 1,700 of these were connected. After the three engines, totaling 400 horsepower, had been started and found to be in good working order, the connections were made with the dynamos and the 1,700 lights lighted with a brilliancy which seemed to be superior to the light now furnished.

Slice Cut Off Lighting Bill

Portland, Ore.—On the ground that the city has not been receiving from the Portland Railway, Light and Power Company the amount of street illumination for which it pays, the City Executive Board reduced the bill of the corporation for March, amounting to \$8,080, to \$5,268, and ordered the Mayor and auditor to draw warrants for the latter amount. The decision was reached on the basis that the candlepower of the lights in use were only 1,200, while the contract specifies 2,000.

Chicago Gives Up Lighting Business

Chicago, Ill.—The city of Chicago is going out of the electric lighting business. City Electrician William Carroll is now engaged in winding up the enterprise, and within a month the municipality will have retired as a producer of electricity. The retirement probably will be permanent. In the future the city will purchase all the current required for the municipal electric lighting system from the Sanitary District. The city steam plants are being turned into distributing stations for the drainage canal current, which the Council has contracted to purchase at \$15 a horsepower. In this way the city will be enabled to light the streets at a great reduction from the cost in the past. At present 5,023 city electric lights are being operated with canal current, leaving 3,171 operated from the city plants, which will be transformed into distributing stations in the next month. The city also will open at once a transforming station in which the canal current will be distributed directly from the canal feed wires. Several other transforming stations are to be established this year, and the city then will purchase all the current possible to use within the limitations of extension imposed by the City Council.

Profitable Municipal Plant

Marquette, Mich.—The municipal lighting plant, already profitable, is to be improved so as to cut down the loss in transmission from the power plant to the city from 28 to 10 per cent. A transformer station will be built in the city and the current transmitted at a voltage of 6,600, instead of 2,200 as now, and the loss will be cut down to 10 per cent. Saving this loss will supply the power now in demand for new business. Although the rates are low, 5 cents per k.w.h. for business houses and 7 cents for residences, the plant earns \$55,000 a year, mostly net.

Lighting System for Downtown District

San Francisco, Cal.—A comprehensive plan for lighting the new retail district of the downtown section of the city has been submitted to the Board of Supervisors by the Permanent Downtown Association, an organization composed of merchants, property owners and other business men in the district bounded by Sutter, Powell and Market streets. By holding a competition among leading architects, the association has secured a handsome design for electric light poles, which will be an ornament in daytime as well as an efficient lighting mast at night. The scheme contemplates 160 poles, averaging about eight poles to a block and three to the short blocks. Since the Supervisors have accepted the plan, it now remains for them to furnish the light, and once that is agreed on the poles will be erected free to the city.

FIRE AND POLICE

Permanent Men to Replace Call-men

Bayonne, N. J.—An ordinance, supported by Mayor Pierre Garven, to abolish the employment of call-men in the Fire Department and substitute half their number of full-pay men has been introduced in Council. Seventeen additional permanent men are to be appointed—three to each of the five engine companies, and one to each of the two hook and ladder companies. The change will result in keeping more men on duty during meal times. The salary of call men is \$100 a year; the permanent men will receive \$840. A reduction in insurance rates is expected to compensate for this. An increase is also proposed for the Fire Chief and other officials.

Police and Fire Departments Strengthened

Hamilton, O.—In order to give the city better protection and take care of the annexed territory, the Police Department will be strengthened by the addition of 23 more men and the Fire Department by the addition of eight men. New engine houses will be built in East Hamilton and Lindenward, to each of which four men will be assigned. Mayor Straub has suggested that police stations be provided in the way of annexes to engine houses. The total police force will be 59, or one patrolman for about every 750 inhabitants.

Shake-up in Louisville Police Force

Louisville, Ky.—Chief of Police Haager has announced a shake-up in the Police Department. Detectives will be required to be more active and not do so much loitering about hotels and other public places. From the red-light district a number of patrolmen and Sergeants will be sent to other parts of the city and new men from other districts assigned to their places. Capt. Thomas Maher, Chief of Detectives, is a very active man himself, working at all hours during the day and part of the night, and Chief Haager thinks the subordinates in his office should do the same.

Better Horses and More Apparatus for New Orleans

New Orleans, La.—At a recent meeting of the Fire Board, when a conflagration on Canal street was discussed, the live stock of the Department was characterized as "stogies" half fed and unserviceable. The Board recommended the purchase of ten additional animals and instructed the Secretary to communicate with the Department's veterinarian with reference to getting better stock. The Board also recommended the purchase of two first-size engines and two aerial towers to be installed in the commercial district. The breaking of the top of an aerial ladder at the Canal street fire was investigated and found not to be due to any defect in the ladder, but to the attempt to raise it when not in a suitable position.

More Auto Apparatus

Springfield, Mass.—Fire Commissioners Kirkham and McClinck have conferred with Mayor Sanderson regarding the Commission's recommendation of a special appropriation of \$9,000. It is proposed to purchase two combination hose and chemical automobiles and to repair the Chestnut street engine house, making it an automobile station exclusively, thus doing away with the necessity of stable accommodations.

GOVERNMENT AND FINANCE

Sixty-day Limit for Damage Claims

Albany, N. Y.—Governor Hughes has signed the McFarlane bill, amending the village law relative to damage claims against the village, requiring that a notice must be filed within 60 days after the injury.

Restricts Vote of Officials Financially Interested

Bridgeport, Conn.—Mayor Henry Lee has approved the ordinance prohibiting all citizens who are pecuniarily interested directly or indirectly in any public service corporation operating in the city from voting on appropriations or other matters relating to the business of those corporations. The general opinion among city officials is that the city should not be deprived of the services of able business men because they might own stock in public service corporations, and that it was sufficient that they should not vote in matters where their personal interests and those of the city might conflict.

Gloucester May Change Government

Gloucester, Mass.—The Committee on Cities of the Legislature at Boston voted to report favorably upon a new charter for the City of Gloucester, which follows in many respects the Haverhill charter, recently reported in the House. It provides that the City Council shall consist of a Mayor and four Councilmen, each elected for one year. School Committee shall consist of nine members, three to be elected each year. City Council shall not pass an appropriation of a sum of more than \$500 until after the same has been laid on the table one week. The various city departments shall be controlled as at present. The salary of the Mayor shall be not more than \$1,200 and the salary of each member of the City Council not more than \$1,000 per year, and the City Council shall not have power to increase salaries above \$1,500 for each member or \$1,800 for the Mayor. A referendum clause is attached to the bill, and it shall be submitted to the people for their decision at the next election. The bill as a whole is along the lines of the one presented to the committee by the Commission appointed by Mayor Parsons.

Employment of Local Labor Required

Niles, O.—Mayor Naylor has reported to the Board of Public Service that a contractor for sewer work was not giving employment to citizens of Niles, as required by the contract, but was employing laborers from Youngstown. Instructions were given to Engineer Brewer to see that the contractor complied with his contract. Accordingly, the engineer went to the sewer the following morning, and, when the Youngstown men appeared, ordered the work stopped until Niles men were put to work.

Mayor Wants Interest for City Funds

New Britain, Conn.—In his annual message, Mayor George M. Landers recommends that the city make an arrangement with the local banks, by which it may receive interest on all deposits exceeding a certain minimum, to be mutually agreed upon.

REFUSE COLLECTION AND DISPOSAL

Favors Crematory for County

Beaver Falls, Pa.—After a recent meeting of Council the members adjourned to the parlors of the Grand Hotel, where they listened to an address by Dr. Wheelock, Deputy State Inspector of the Department of Health, on the subject of sewage and garbage disposal. He strongly advocated the erection of a large reduction plant for the use of the entire valley. This would greatly decrease the cost of a plant for every borough, and, with a central location, would be suitable for the use of all the towns in the valley.

Should Railroad Sprinkle Streets?

Boston, Mass.—Mayor George A. Hubbard believes that the Boston Elevated Railway Company should sprinkle the streets through which its cars pass, and he intends to take the matter up officially with the Board of Railroad Commissioners. He detailed his secretary, James C. White, and Superintendent of Streets Guy C. Emerson to call on the Railroad Commission and discuss the matter informally. It is understood that the Railroad Board is inclined to think that there is nothing in the present laws that can compel any street railway company to do this work. The Mayor takes the ground that much of the dust comes from the sand that the company sprinkles on its tracks, and that accordingly it should do its part towards suppressing it.

Two Thousand Notices of Garbage Law Violations

Charleston, S. C.—In its efforts to compel compliance with the ordinance requiring that garbage shall be kept in tightly covered metal cans, the Health Department officials have mailed warnings of violations to 2,000 citizens. If the people warned fail to comply with the law, they will be brought before the Recorder and fined.

Favors Sunday Street Sprinkling

Grand Rapids, Mich.—The Board of Public Works has decided to adopt the recommendations of the residents on Madison and Jefferson avenues, that those streets be sprinkled on all dry and dusty Sundays during the Summer. The opinion expressed by most of the householders was that conditions had become intolerable since sprinkling had been discontinued, and that, if the work was not done by carts, it would have to be undertaken by the householders individually.

Would Organize a Street Cleaning Department

Racine, Wis.—Definite steps have been taken towards the formation of a Street Cleaning Department, a matter which has been agitated for years. City Attorney Burgess and City Engineer Connolly have been delegated by the Council to obtain information on the subject. Hitherto streets have been cleaned by employees of the Board of Works whenever time could be spared from other duties. Only two streets have had regular cleaners who gave all their time to the work. By the end of this summer Racine will have twenty-five miles of paved streets. Hence the need of a department with a superintendent at its head.

Assessment Plan for Street Sprinkling Adopted

Newburgh, N. Y.—Governor Hughes has signed the Taylor bill amending the city charter so as to provide street sprinkling by the municipality. According to the bill, whenever persons owning one-half of the lineal foot frontage on any street petition the City Council, requesting that the street be sprinkled, the request shall be granted. The cost of the work shall be assessed on the property.

Incineration of Garbage Favored

Troy, N. Y.—Commissioner of Public Works Shields and City Engineer Grimes have submitted to the Board of Contract and Supply a preliminary report upon the best method of disposing of household waste in the city of Troy. The report is based on information obtained from visits to disposal plants in Staten Island, N. Y., Westmount, Canada, and other places, as well as from a study of reliable records. It is estimated that Troy has an average of 125 tons of waste a day to dispose of. An incinerating plant of a capacity of 100 tons daily is estimated to cost \$115,000, or, if two 75-ton plants should be preferred to save the cost of hauling, \$25,000 more. The cost of operation is placed at about 30 cents a ton.

PARKS AND OUTDOOR ART

Savin Hill Park to Be Laid Out

Boston, Mass.—Mayor Hibbard has acquiesced in the repeated demands of the people of Savin Hill and he is to allow the bonds for the purchase of the land on the top of the hill to be issued. A loan of \$35,000 for the park was passed during the last administration, but until now it has been held up by Mayor Hibbard.

Olmsted's Plans for Grant Park

Chicago, Ill.—Judging from the plaster of paris model of Grant Park recently exhibited in the Art Institute by Frederic Law Olmsted, Chicago will have the most beautiful front yard of any city in the United States. The model shows a magnificent plaza, beautiful buildings, flower gardens, boulevards and winding drives. Large, well-equipped rest houses will look out over the lake, and boathouses and landing places will make access to it easy. The central point in the scheme is the Field Columbian Museum, which will front on Michigan avenue, near the center of the park. The avenue opposite the museum will broaden into a plaza two blocks wide and extending at a gentle grade 500 feet east of the avenue to the face of the museum. The plaza will a gigantic bridge over the railroad tracks and will practically make a subway of the Illinois Central. The field between Jackson boulevard and Randolph street will be converted into a monster playground. Between Jackson boulevard and Hubbard court will be grass plots and gardens surrounding the museum, and south of Hubbard court will be a big meadow. South of the museum and west of the meadow will be a gymnasium and natatorium flanked on one side by a cinder running track.

Playground for Cincinnati Children

Cincinnati, O.—The equipment of 100 acres for playground purposes has been promised the city of Cincinnati if the land is leased by the city with the privilege of purchase as an addition to the park system. The property is to be situated in the Mill creek bottoms of the West End, where some of the most famous ball players of the last quarter of a century got their early training, and the offer came from Melville E. Ingalls, politician and railroad magnate, who guaranteed to raise \$20,000 for the purpose.

Expert Instructor in Swimming Wanted

Newark, N. J.—Secretary Church, of the Essex County Park Board, is looking about for a good swimmer to teach park policemen how to keep afloat in the park lakes and rescue the perishing if need be. It is not because the park policemen cannot swim that the board wants an instructor, for most of them are adept at the art. What is wanted is expert instruction in rescuing drowning persons.

Philadelphia Raises Big Sum for Playground

Philadelphia, Pa.—All Philadelphia recently turned itself to one vast fair at which only one thing was sold—tags for the benefit of the Playgrounds Association. The movement was started under the auspices of the Board of Education to equip playgrounds, of which at present there is only one. Girls and women stood on every corner selling tags, many of which were bought for large sums, one firm paying \$100 for a single tag. The Mayor paid a heavy price for his tag, as did all of the city officials. It is estimated that nearly 400,000 tags were sold throughout the city.

RAPID TRANSIT

Commission Defines Duties of Carriers

Albany, N. Y.—An important attitude toward the operation of street railway properties in the State is announced by the Up-State Public Service Commission. In an opinion, written by Commissioner Decker, it is held:

That carriers by railroad in this State shall at all times render to the public safe, common, adequate and proper service, and maintain their line or lines in a condition to afford such service, and ordinarily the fair return to which the carrier is entitled from the property necessarily devoted to public use must be assumed to afford means for maintaining such property in condition to enable the carrier to provide service which is safe and adequate for the reasonable public needs. Unfortunate or improvident management of its finances by a common carrier corporation, and neglect in the maintenance and operation of its line and equipment cannot be held to redeem it or excuse the carrier from reasonable compliance with such statutory requirement. In this case it is plain that the company has allowed the line and equipment to deteriorate far below any reasonable standard, and this Commission must, in the discharge of its duty under the statute, issue its order requiring the company to promptly reach and henceforth maintain such reasonable standard of public service.

The decision was given in ordering the Port Jervis Electric Light, Power, Gas and Railroad Company to put its railroad property in proper condition, and to operate it so as to serve the public.

Chester Council Busy With Railway Regulations

Chester, Pa.—The City Common Council does not seem to feel very much sympathy for the Chester Traction Railway Company in their troubles with their employees, who are on a strike. At any rate, a number of resolutions and ordinances have been introduced tending to show that the city will hold the company strictly to its agreements, and grant no more favors. One ordinance declares null and void the grant of the use of certain streets for purposes of operating a railway. Another provides that every car must have a bell or gong. A resolution notifies the company to carry out the terms of an ordinance regarding the repair of a bridge.

Subways in New York

New York, N. Y.—Samuel Rea, Third Vice-President of the Pennsylvania Railroad, has written to Comptroller Metz, supporting the contention made by John B. McDonald that there is no need for the proposed Broadway-Lexington avenue subway, and that the traffic requirements of the city will be met for some time to come by continuing the branch of the present subway from Forty-second street south under Seventh avenue. Mr. Rea said that as soon as the Pennsylvania terminal is finished that railroad will place in the Seventh avenue and Thirty-third street district 200,000 passengers daily.

Bion J. Arnold, consulting engineer, has presented his fourth report on the subway to the Public Service Commission. He says that the fundamental defect of the subway is that it fails to carry sufficient passengers to justify the investment. Estimating the cost of the subway at \$50,000,000, and equipment at \$25,000,000, and the number of passengers carried at 200,000,000, the year's income is but 13 per cent. of the actual investment. Allowing 45 per cent. of the gross receipts for operating expenses and maintenance, there is but 7.33 per cent. for interest, depreciation, taxes, sinking fund and profit. Elevated and surface roads have a gross income of from 20 to 25 per cent. of

their cost. Mr. Arnold believes that the capacity of the subway may be increased from 60 to 75 per cent. without greatly changing its construction.

Governor Hughes vetoed the amendments to the Elsberg law briefly on the ground that the city would be conceding far too much in granting fifty-year operating franchises—albeit the Public Service Commission had urged the passage of this bill—and says in his memorandum that he does not think it likely that private capital could be induced to construct upon the proposed terms. "But it may be regarded as certain," he adds "that if private capital could be induced to construct under the provisions of this bill, it would demand the most favorable terms. We should not cherish any illusions as to the prospects of competition in obtaining privileges of this sort."

Transfers Only for Straight Fares

Philadelphia, Pa.—Public indignation at the action of the Rapid Transit Company in raising the rate of fare by refusing free transfers except on straight five-cent fares is undiminished. Thousands are still refusing to pay the increase, and are walking a portion of the distances to and from work, while others are using the steam railroads. The number of transfers given at the important transfer points are even less than when the change was first made.

MISCELLANEOUS

Humane Ordinance Passed

Athens, Ga.—An ordinance has been passed declaring it to be unlawful for any person to overload any animals of burden used within the city for the transportation of goods or merchandise; or to use, work or employ in any manner any bruised, maimed, sick or lame beast of burden; or to ill treat in any manner any animal. It is further provided that all drays shall be equipped with brakes, which shall be used when the team is going down hill.

Saves Money by Single Purchase of Coal

Boston, Mass.—A saving of \$22,557, approximately 20 per cent. over the cost of coal last year to certain city departments, will be effected by the purchase of 32,500 tons of steam coal in a single order. The Finance Commission, which advised this method of purchase, also recommends that chemical analyses be made of all coal delivered, that boiler tests be made under a general rule to apply to all departments, and that records be kept for future reference.

New Ohio Building Regulations

Columbus, O.—An amendment to the building laws of the State provides that:

Municipal corporations shall have the right to regulate by ordinance the use, control, repair and maintenance of buildings used for human occupancy or habitation, the number of occupants and the mode and manner of occupancy, for the purpose of insuring the healthful, safe and sanitary environment of the occupants thereof; to compel the owners of such buildings to alter, reconstruct or modify the same, or any room, store compartment or part thereof, for the purpose of insuring the healthful, safe and sanitary environment of the occupants thereof, and to prohibit the use or occupancy of such building or buildings until such rules, regulations and provisions have been complied with.

No Monopoly on Conduit

Pottsville, Pa.—The Bell Telephone Company will not be allowed to lay a conduit for its wires under Pottsville's new paved streets. Permission had been granted, but was withdrawn when it was learned that the company would not allow the wires of other companies to enter the conduit or allow the town its free use.

Master Mechanic for City

Tacoma, Wash.—Commissioner of Public Works H. J. McGregor has proposed that the city appoint a master mechanic to be responsible for the good condition of all the city's tools and machinery. A city machine shop, where all ordinary repairs could be made, is a part of the scheme, which, of course, aims at economy in maintenance.

LEGAL NEWS

A Summary and Notes of Recent Decisions—Rulings of Municipal Interest

DEFECTIVE ASSESSMENT—REMEDIES

Zorn vs. Warren-Scharf Asphalt Paving Co.—Under Laws 1901, providing that after receiving bids for the improvement of a street, in case all bids are rejected as unsatisfactory, then the Common Council may order the work to be done by the Street Commissioner, the total cost of the work not to be in excess of the lowest bid, or that the Common Council may in such case readvertise for bids for the work, where, after a City Council accepted one of a number of bids submitted for the pavement of a street in response to advertisement therefor, such action was reconsidered and the bid rejected, and the proposal of another bidder, submitted at the same time as the bid rejected, accepted, without readvertisement for bids, the proceedings were jurisdictionally defective and insufficient to support an action to foreclose an assessment for the improvement. Where proceedings for the pavement of a street were jurisdictionally defective, and the property owner gave timely notice to the contractor and the city that he would contest the assessment if the improvement was made, such property owner was not required to restrain the improvement by injunction, but was entitled to raise the objection in a suit to foreclose the assessment for the improvement.—Appellate Court of Indiana.

DEBT LIMIT—GENERAL LIABILITY

Simons vs. City of Eugene et al.—Where a city's charter authorized a bond issue for the construction of a power plant and lighting system, and the city contracted for engineer's services payable out of the proceeds of an authorized issue of bonds for such purpose, it was no objection to the validity of such a contract that the city's general indebtedness already exceeded the charter limit. A city having express authority to issue bonds to defray the cost of a lighting and power plant, pursuant to a vote of the taxpayers, employed certain engineers to make permanent surveys and to complete plans and specifications for the plant, their services to be paid for out of the moneys to be raised by sale of the bonds. The bonds were issued, but were not sold, for want of bidders, whereupon the city resubmitted the question of bond issue to the voters without providing for the payment of the engineers' services, and, the vote being in the negative, warrants were issued to the engineers payable out of the city's general fund. Held, that the city was at fault in not pursuing the sale of the bonds under its rightful authority acquired by the first vote until it had satisfied the demand of the engineers, and was, therefore, liable for payment of such demand out of the general fund.—United States Circuit Court, District of Oregon.

PETITIONS—FAILURE TO OBSERVE ORDINANCE

People ex rel. Brownell vs. Board of Assessors of the City of Buffalo.—The fact that a City Council, in improving the streets, does not observe an ordinance providing that a petition for improvements shall be void unless every name upon it shall be the bona fide signature of the person indicated by such name, who, at the time of signing, shall have written opposite his signature the date when it was written, but accepts a petition, some signatures to which are by attorney, and some of which have no dates affixed, is not ground for reversing the proceedings on certiorari, since, as the Council was acting within the scope of its authority under the city charter, it was no objection that in conducting the proceedings it failed to conform to the by-laws established by itself to carry into effect the powers conferred.—New York Supreme Court.

SIDEWALK OBSTRUCTION—NEGLIGENCE

Slaughter vs. City of Huntington.—In an action against a municipal corporation for injuries caused by an obstruction of a street or sidewalk, when the evidence of the plaintiff proves such facts and circumstances as show that the plaintiff was guilty of contributory negligence in causing the injuries, the court should, on the motion of the defendant, exclude all the plaintiff's evidence from the jury. Contributory negligence, when it depends upon questions of fact and testimony, is for the jury; but when the facts are undisputed, or indisputably established by the evidence of the plaintiff, the question becomes one of law for the court.—Supreme Court of Appeals of West Virginia.

SURFACE DRAINS—OVERFLOW

Incorporated Town of North Judson vs. Lightcap et al.—A complaint which alleges that a town constructed drains, collected surface water, and brought the water to plaintiff's premises, that it failed to provide an egress for the water so collected, and that by reason thereof the plaintiff's premises were overflowed, states a cause of action based on the failure of the town to provide for the escape of surface water collected, and, where the court finds that the waters that overflowed plaintiff's premises overflowed the same by reason of the failure of the town to provide proper drains after collecting the water, the question who constructed the gutters collecting the water is immaterial. A town collecting surface waters in a channel along a street, and then obstructing the channel, thereby causing the water to flow on adjacent property, is liable for the injuries sustained. A municipal corporation is not liable for consequential injuries resulting from the grading of streets where the work is done in a careful and skillful manner, but where the work is done in a negligent and unskillful manner it is liable for injuries to adjacent property. The damming of the gutter along a street by embankment without providing egress for surface waters that any one knows will collect is negligence, rendering the municipality constructing the embankment liable for injuries to adjacent property caused by water overflowing it. A town graded streets and thereby caused surface water to flow down the same to another street, where the flow was obstructed by the grading thereof. On account of insufficient outlet the water was backed on property adjacent to the street. Held, that the grading of the street was negligently done, rendering the town liable for the injuries sustained.—Appellate Court of Indiana.

TELEPHONE FRANCHISE—REGULARITY

Missouri River Telephone Co. vs. City of Mitchell.—A domestic telephone company applied to a city for a permit to construct and operate its line in the city. At a special meeting of the Council, at which the Mayor and six of the eight Aldermen were present, an ordinance granting the permit was presented and read the first time by unanimous consent. At the next regular meeting the ordinance was adopted. It was approved by the Mayor and duly recorded and published. Immediately thereafter the company, relying on the permission, began the construction of a telephone line along the route designated by the city officials, and completed an equipment for the establishment of a telephone system. The special meeting of the Council was irregular, in that notice of it had not been given to the absent aldermen, and it was held pursuant to an ordinance relating to special meetings which had never been legally adopted. Held, that the city was estopped from contesting the validity of the ordinance, and could not withdraw the consent to the company.—Supreme Court of South Dakota.

ASSESSMENTS—STREET WIDENING

James vs. City of Seattle et al.—The contention that there has been no valuation placed upon the property within the proposed assessment district, for the reason that a part of the property is taken for widening the street, and the balance of the property by itself has never been assessed, is unsound, since the city cannot take any property without compensation, and the increased width of the street is presumed to add to the value of the remaining property, and the last valuation for general taxation controls in fixing the cost of the improvement.—Supreme Court of Washington.

PRIORITY OF LIENS

Di Menna et al. vs. City of New York et al.—Where plaintiffs agreed with contractors to furnish the labor and material for a city improvement as a joint enterprise, under the direction and financial backing of F., who had an interest in the contract, and certain material men furnished materials to plaintiffs with the knowledge and approval of F., the material men's liens on the funds in the city's hands applicable to the contract had priority over plaintiffs' lien.—New York Supreme Court.

STREET IMPROVEMENT—VOID CONTRACT

Hatch vs. Nevills et al.—A contract for street improvements providing that all loss or damage arising from the nature of the work to be done under the agreement, or from any unforeseen obstruction or difficulties which may be encountered in the prosecution of the work, etc., shall be sustained by the contractor, is void as tending to increase the cost of the work, and is therefore insufficient to support an assessment for work done thereunder.—Supreme Court of California.

THE MUNICIPAL INDEX

In Which Are Listed and Classified by Subjects All Articles Treating of Municipal Topics Which Have Appeared During the Past Month in the Leading Periodicals

ROADS AND PAVEMENTS

Dust Preventives on Wayland, Mass., roads, Experiments with. Made by Office of Public Roads with tar and oil emulsions. 3 3-4 pp., Engineering Record, May 2.

Street Dust, Data on. Abstract from report of Parsons, Hering and Whinery. 3-4 p., Engineering Contracting, May 20.

Street Dust, Suppressing. Editorial. 1-2 p., Municipal Journal and Engineer, May 13.

Cost of Oiling New York State Highways and Results Obtained in 1906. 2 1-4 pp., Engineering Contracting, May 6.

Oiling Roads in New York State. Methods and cost in 1905-6. From the report of Arnold G. Chapman, Engineer in Charge. 3-4 p., Engineering News, May 14.

Calcium Chloride, as a dust preventive. An experiment with, in Washington, D. C. 1-3 p., Engineering Record, May 23.

Tar and Oil on Rhode Island Highways, Experiments with. Paper before American Assn. for the Advancement of Science. By Arthur H. Blanchard, Asst. Eng. R. I. State Bd. Pub. Roads. 3 pp., Municipal Engineering, May.

Tarring and Oiling Roads. Experiments made in Washington, D. C., in 1907. 1 1-4 pp., The Automobile, May 14. 3 pp., Good Roads, May.

Tar and Oil Road Experiments in Jackson in 1905, Results of. 1-2 p., Engineering Contracting, May 20.

Tar Spraying in Bristol, England. Results during past year. 1-3 p., Engineering Record, April 25.

Tar Macadam, Slag. Experiments at Battersea, England, 3-4 p., The Surveyor, April 17.

Gladwell Method of Treating Macadam. English method of using bituminous binder. Full description. 2 1-2 pp., Good Roads, May.

Asphalt Macadam, Kentucky Rock. By H. C. Innes. 1 p., Municipal Engineering, May.

Brick Pavements, An Object Lesson in. Illustrated. 1 1-2 pp., The Clay Worker, May.

Vitrified Brick the Best all-around Paving. Illustrated. 2 pp., The Clay Worker, April.

Concrete Pavements in Windsor, Ont. Method and Cost of Constructing. 1 1-3 pp., Cement Age, May.

Machinery Road Building. Description of graders, plows, etc. By Clark E. Gray. Illustrated, 3 pp., Good Roads, April.

Asphalt Plant, Municipal, of Brooklyn, N. Y. Operating results. Abstract of report of Chief of Bureau of Highways. 1-2 p., Engineering News, May 21.

Street Paving Data. Work done last year and planned for this in 6 cities. 1-4 pp., Municipal Journal and Engineer, May 20.

Street Paving in London. Reports for last year to the Metropolitan Paving Committee by the several Boroughs. 2 pp., The Surveyor, April 17. 4 pp., Contract Journal, April 22, 2 1-4 pp., The Surveyor, April 24.

Specifications for State Highways of Connecticut. With cross-sections. 3 pp., Good Roads, April.

Culverts and Bridges Recommended by Penn. State Highway Dept. Types of steel and concrete structures. 4 1-4 pp., Good Roads, April.

Bridges and Culverts in the Philippines. Illustrated. 3 pp., Far Eastern Review, April.

Reinforced Concrete Highway Bridges and Culverts. Paper before Nebraska Cement Users' Association. By James A. Mortland. 3 1-2 pp., Municipal Engineering, May.

Motor Traffic as it Affects Municipalities. Paper before Students of Institution of Civil Engineers. By A. E. Jackson. 2 1-3 pp., The Surveyor, April 17 and 24.

Effects of Motors on Roads, etc. By W. J. Taylor. 7 1-2 pp., The Surveyor, May 15.

Road Paving and Motor Traffic. Reports from various English Cities. 1 p., Local Government Journal, April 18.

Trees, Roadside. Benefits to French roads. 3-4 p., Consular and Trade Reports, May 19.

Road Construction, The Problems of. Relation between road and wheel. By H. S. Hele-Shaw and Douglas Mackenzie. 3 pp., Engineering Magazine, May.

Road Construction and maintenance. Paper at Municipal Building and Health Exhibition. By H. T. Wakelan. 2 pp., Contract Journal, May 13.

Practical Suggestions on Highway Improvements. From report of A. W. Campbell, Deputy Minister of Public Works, Toronto. Illustrated, 3 pp., Good Roads, April.

Switzerland, Roads in Methods of administering, cost, etc. Consular and Trade Report, April 1.

English Rural Roads. Increased Cost of Maintenance. 1 p., Consular and Trade Report, May 16.

Organized Investigations, A Plea for. "Street Paving in America." 1 p., The Surveyor, May 1.

Road Requirements in Town and Country. Paper before Royal Sanitary Institute. By A. Brown. 3 1-2 pp., Good Roads, May.

SEWERAGE AND SANITATION

Sewage Purification and the Health Officer. Non-technical description of present purification methods. By A. Elliott, Kimberly. Special Ass't Eng., Ohio State Board of Health. 8 1-2 pp., Ohio Sanitary Bulletin, March.

Sewage Disposal. Presidential Address before Association of Managers of Sewage Disposal Works. By Lieut. Col. Jones. 2 pp., The Surveyor, April 17. 1 1-2 pp., Contract Journal, April 29.

Practical Sewerage and Sewage Disposal. General treatise (Continued). By H. C. H. Shenton. 1-2 p., Local Government Journal, April 18 and 25, May 2, 9 and 16.

Water and Sewage Purification. Some points brought out by the special investigation of the Ohio State Board of Health. By R. Winthrop Pratt, Chief Eng. State Bd. of Health, Ohio Sanitary Bulletin, March.

Sewage Disposal Investigations by the University of Wisconsin. Brief summary of work being done. 1-3 p., Engineering News, May 7.

Doryhulme Sewage Works, Manchester, Eng. Report of operation of septic tank and contact beds. 1-2 p., Engineering News, April 30.

Colloids in the Purification of Sewage, The Role of. Translated by J. H. Johnston. 1 p., The Surveyor, May 1.

Clarification Test of Sewage and effluents. Some applications of. 1 p., Water, May 15.

Disinfecting Plant for Hospital sewage. By August Wolfsholz. Illustrated. 1 1-2 pp., Gesundheits-Ingenieur, May 16.

River Pollution. Discussion before Royal Sanitary Institute. 2 1-3 pp., The Surveyor, April 17.

Pollution of Streams, New York Laws Relating to. By A. H. Seymour, Sec'y of State Dept. of Health. 1 1-4 pp., Water and Gas Review, May.

Ohio Stream Pollution Law. Editorial comment. 1-3 p., Municipal Journal and Engineer, May 27.

Ohio Law Governing Water and Sewage Purification and Stream Pollution. Text of the law. 1 1-4 pp., Engineering Contracting, May 6.

Passaic River Pollution awards. Synopsis of recent awards to riparian owner. 2-3 p., Engineering Record, May 23.

House Drains, Bacteria in. Results of Major Horrock's Experiments. By Dr. F. J. H. Coutts. 3 pp., Municipal Engineering, May.

Pipe Drains. Greatest permissible grade of. By Theodor Lutz. Illustrated. 2 pp., Gesundheits-Ingenieur, May 9.

Sewerage of Auckland, N. Z. Report of Midgley Taylor. Illustrated, 2 1-4 pp., Contract Journal, April 22.

Outfall Sewer Construction at Chicago, Ill. A novel piece of. Illustrated. 1 p., Engineering Contracting, May 6.

Sewer Conduits. Phenomena of the Crushing of. Abstract from paper before Am. Society of Municipal Improvements. By J. N. Hazlehurst. 3 pp., Municipal Engineering, May.

Reinforced Concrete Conduits. American and British Examples of. By E. R. Matthews. Illustrated, 5 pp., Concrete, May.

Reinforced Concrete Pipe, Tests of. Result of test made at the University of Illinois. Abstract of paper before Western Society of Engineers. By Prof. A. N. Talbot. Illustrated. 4 1-2 pp., Engineering Contracting, May 6.

Reinforced Concrete Sewers in Wilmington, Del. Method and cost of construction of 3,200 feet of 30 and 36-inch sewer. Illustrated, 3-4 p., Engineering Record, May 9.

Clay and Cement Drain Tile, Tests of the strength of. From experiments at Iowa State College. By Prof. A. Marston. 7 pp., Iowa Engineer, March.

Sewage Pumping at Dayton, Ohio. Illustrated, 1 1-4 pp., Electrical Review, May 9. Illustrated, 1 1-2 pp., Power, May 5.

Automatic Pumping of Sewage at Flood Periods at Dayton, O. Illustrated. 1-3 p., Engineering News, April 30.

Sanitary Conditions in the Philippines. From annual report of 1907. Abstract of

Manila Sanitary Code and recommending sanitary appliances. Illustrated, 5 pp., Far Eastern Review, April.

Municipal Sanitation, Its relation to the State and the National Government. Paper before National Municipal League. By Chas. O. Probst, Sec'y Ohio Bd. of Health. 4 1-2 pp., American Health, May.

Epidemic Typhoid, Tracing the Origin of. By Dr. H. M. Platter, Medical Inspector, Ohio State Board of Health. 2 pp., Ohio Sanitary Bulletin, March.

Abattoirs in South Africa, Municipal. General description. By R. A. Webster, Town Engineer, Krugersdorp. Illustrated, 1 3-4 pp., The Surveyor, May 1.

New Abattoirs of the Chaux-de-Fonds (Continued). By Edw. Tissot. 10 1-4 pp., Technique Sanitaire, April.

WATER SUPPLY

Water Works System of Ottawa, Kansas. Sedimentation, pumping plant, etc. Illustrated. 1 p., Engineering Record, May 23.

Water Supply System of Seattle, Wash., general description. Illustrated, 2 pp., Engineering Record, May 23.

Water System for Tacoma. Brief description for plan of gravity supply. By H. Cole Estep. Illustrated, 2 pp., Municipal Journal and Engineer, May 20.

Winston, N. C., Water Works. Description of supply, its filtration, etc. By J. N. Ambler. Illustrated, 3 1-2 pp., Municipal Journal and Engineer, May 27.

New Orleans Water Works. Description of a new system now nearing completion. Illustrated. 6 1-2 pp., Municipal Journal and Engineer, May 6.

Lynchburg Water Supply. Concrete dam, wood stave pipe, etc. Illustrated. 1 p., Engineering Record, May 16.

Water Supplies for Oakland, Cal., and Other Cities on the East Shore of San Francisco Bay. Outline of plans and work being done. By Philip E. Harroun, Assistant Chief Engineer, People's Water Co. Illustrated. 1 1-2 pp., Engineering News, May 7. 2 1-4 pp., Engineering Record, May 9.

London Water Supply in Early Times. General history. 3-4 p., Contract Journal, April 29.

Rangoon Water Works. Brief description. 1-2 p., Far Eastern Review, March.

Small Water Supplies. Paper at Municipal, Building and Public Health Exhibition. By W. H. Booth. 4 pp., The Surveyor, May 15.

Water Works Data. Details of consumption, distribution systems, etc., of about 400 plants especially collected. 6 pp., Municipal Journal and Engineer, May 6.

Underground Waters of Breslau. Quality, quantity, etc. By Drs. Beyschlag and Michael. 6 1-2 pp., Technique Sanitaire, April.

Permeability of Earth to Water, with special reference to the collection of ground water. By Chr. Mezger. 10 pp., Gesundheits-Ingenieur, April 18.

Water Supply from a Gravel Bed. Development of such supply in Santa Clara Valley, Cal. General description. By Edwin Duryea, Jr. 5 pp., Cornell Civil Engineer, May.

Catchment Areas, Water Supplies from, Some Notes on. By Thos. Duncanson, Assistant Water Engineer, Liverpool. 2 3-4 pp., Water, April 15. 1 1-2 pp., The Surveyor, May 1.

Water Storage and Water Power In-

vestigations in New York State. 1 p., Engineering News, April 30.

Pumping Deep Ground Waters, Methods of. Description of appliances. (Concluded.) By Chas. B. Burdick. Illustrated. 4 3-4 pp., Water, April 15; 5 1-4 pp., May 15.

Pumping Statistics. Data concerning fuel, duty, cost, etc., of about 300 plants especially collected. 3 pp., Municipal Journal and Engineer, May 6.

Producer Gas Plant for Municipal Pumping. Description of Winnipeg, Canada, fire service plant. 1 p., American Gas Light Journal, May 18.

Duluth Electric, Gas and Steam Engine Pumping Stations. By Frank C. Perkins. Illustrated. 2 1-4 pp., Municipal Engineering, May.

Purification of Municipal Water Supplies. Popular description of standard methods. By Philip Burgess, Special Assistant Engineer Ohio State Board of Health. Ohio Sanitary Bulletin, March.

Mechanical Filtration, The Development of. Paper before Ohio Engineering Society. By Philip Burgess, Special Assistant Engineer Ohio Board of Health. 1 1-4 pp., The Surveyor, April 24; 2 pp., May 1.

Water Filtration, Modern Methods of. General discussion. By Wm. R. Smith. 7 1-2 pp., Journal Royal Institute of Public Health, May.

Water Purification Data. Collected directly from the cities. 1 p., Municipal Journal and Engineer, May 13.

New Stuttgart Purification Plant. By Herman Werner. 1-2 p., Gesundheits-Ingenieur, April 18.

Water Purification Plant at Ithaca, N. Y., Operating Results of. Technical description, tables, etc. By E. M. Chamot. Illustrated. 4 pp., Engineering Record, May 23.

Filtration Plant, Experimental, and Filter Plant Improvement of the People's Water Co., Oakland, Cal. By W. W. De Berard and Langdon Pearse. Full technical description. Illustrated. 3 pp., Engineering News, May 21.

Filtration Plant at Valparaiso, Ind. General description. Illustrated. 1 1-4 pp., Fire and Water, May 13.

Water Softening Plant at Oberlin, O. Abstract of the 1907 report. 1-2 p., Engineering News, May 7. 1-2 p., Municipal Journal and Engineer, May 6.

Water Softening Experiment, Conducted by Pennsylvania Railroad. 1-3 p., Municipal Journal and Engineer, May 13.

Iron Removal and Absorption of Iron by Water. By G. Oesten. 2 1-4 pp., Gesundheits-Ingenieur, April 25.

Examination of Water, Bacteriological and Microscopical. By W. J. Dibdin. 1 1-2 pp., The Surveyor, May 15.

Earth Dam with Reinforced Concrete Core Wall at Dixville, N. H. By Arthur W. Dudley. Illustrated. 3-4 p., Engineering Record, April 25.

Roller Embankments, Cost of Spreading Earth in. Letter by W. M. Patch, with discussion. 1 p., Engineering Contracting, April 29.

Water Tower at Louisville. Description of 1,200,000 gallon tank. Illustrated. 1 3-4 pp., Municipal Journal and Engineer, May 6.

Reinforced Concrete Water Tanks in Cuba. Two 120,000 gallon tanks in concrete tressels. Illustrated. 1-2 p., Engineering News, April 30.

Water Tunnel, Blue Island Avenue, Chicago. Method of construction technically described. 3 pp., Engineering Record, May 9.

Catskill Aqueduct, New York Water Supply. Description of proposed siphons and deep borings. Paper before Municipal Engineers of the City of New York. By Robt. Ridgeway, Department Engineer. Illustrated. 2 3-4 pp., Engineering Record, April 21.

Construction, Manila Water Works and Sewer. Brief summary. Illustrated. 4 pp., Far Eastern Review, March.

Hauling a Water Main Across the Channel at Vancouver, B. C. Methods and cost. From paper before Canadian Society of Civil Engineers. By John Causley. Illustrated. 1 p., Engineering News, May 14.

Bacteria, Effect of Freezing on. Experiments made by John C. Sparks. 1-2 p., Municipal Journal and Engineer, May 20.

Water Pipe Incrustation at Quincy, Ill. Abstract of paper before American Water Works Association. By W. R. Gelston. 1 1-2 pp., Engineering Record, May 16.

Cast Iron Pipe, Prices Paid for, During Twenty Years. Compiled by Wm. H. Bryan. 1-2 p., Municipal Journal and Engineer, May 6.

Tests of Cast Iron Pipe. Abstract of paper before Western Society of Engineers. By Prof. A. N. Talbot. Illustrated. 2 2-3 pp., Engineering Contracting, April 29.

Wood Pipe Conduit. Method of and reason for constructing four miles of 24-inch wood stave pipe. By T. Chalkley Hutton. Illustrated. 3 pp., Municipal Journal and Engineer, May 6.

Reservoirs, Concrete. Illustrations of the use of the several reinforcement systems. 2 pp., Concrete, May.

San Francisco Reservoir Sites. "Hetch-Hetchy Valley and the Tuolumne Canyon." By Wm. Frederic Bade. Illustrated. 5 1-2 pp., The Independent, May 14.

Chingford Reservoir, London Water Works. General description. Illustrated. 2 3-4 pp., Water, May 15.

Locating Leaks and Repairing a Broken Main. Paper before American Water Works Association. By Geo. H. Robertson. Illustrated. 3-4 p., Fire and Water, May 20.

Cleaning Driven Wells at Lowell, Mass. Method and cost. By Robt. J. Thomas, Superintendent of Water Works. 1-2 p., Engineering News, May 7.

Water Meters, Water Works Plants and. General discussion. By John S. Hall. 2 pp., Western Municipal News, May.

Life and Depreciation of Water Works Plants. Various estimates. From paper before Engineers' Club of St. Louis. By Wm. H. Bryan. 1 p., Municipal Journal and Engineer, May 6.

Franchise, Water Works, Terms of a. Abstract of papers before Engineers' Club of St. Louis. By Edw. Flad and S. Bent Russell. 1 1-2 pp., Municipal Engineering, May.

Statistics, Water Works. Form recommended by New England and American Water Works Associations. 1 1-4 pp., Municipal Journal and Engineer, May 6.

American Water Works Association. Editorial comment on changes recommended. 2-3 p., Municipal Journal and Engineer, May 20.

American Water Works Association, Report of Convention. 4 1-2 pp., Water and Gas Review, May. 2 1-2 pp., Engineering News, May 21.

STREET LIGHTING**AND ELECTRIC POWER**

City Lighting at Little Rock. Annual report of municipal plant. 1-3 p., Municipal Journal and Engineer, May 27.

Illumination of Shady Streets. By A. R. Dennington. 1 3-4 pp., Illuminating Engineer, May.

Street Lighting in Philadelphia. By H. Thurston Owens. Illustrated. 1 3-4 pp., Progressive Age, May 1.

Hotel Lamp Posts in New York. By H. Thurston Owens. 5 pp., Illuminating Engineer, May.

Atlantic City, Street Illumination at. Public and advertising electric lighting. By L. W. Byers. Illustrated. 6 pp., Illuminating Engineer, May.

Electric Meter Accuracy, Light Load. By Paul Lupke, Assistant General Superintendent New Jersey Public Service Corporation. 2 pp., Selling Electricity, March.

Tantalum and Tungsten Lamps. Abstract of paper before Iowa Electrical Association. By Francis W. Willcox. 3 1-4 pp., Electrical Review, May 16.

Luminous Arc Lighting of Toledo. Use of luminous arc system described. By C. R. McKay. Illustrated. 4 1-2 pp., General Electric Review, June.

Gas Meters, The Proving and Testing of. Paper before Southwestern Gas and Electric Association. By J. A. Myler, Jr. 2 pp., American Gas Light Journal, May 25.

Underground Conduits. New monolithic duct system. Method of constructing. By E. S. Larned. 10 pp., Cement Age, May.

Electric Plants, Municipal. South Norwalk, Conn., electric works supplying municipality of East Norwalk. 1-2 p., Municipal Journal and Engineer, May 13.

Steam-Electric vs. Hydro-Electric Power. Features which should control the selection. By Henry D. Jackson. 3 3-4 pp., Power, May 19.

FIRE AND POLICE

Fire, Parker Building. Report of New York Board of Fire Underwriters Abstracted. 1 1-4 pp., Engineering News, May 21.

Chelsea Conflagration. Illustrated. 13 pp., Insurance Engineering, May.

Fire Service, Metropolitan. Plans to unite 24 Massachusetts city and town fire departments. 1 3-4 pp., Fireman's Herald, May 2.

New York Fire Department, Underwriters' Report on. Abstract of National and New York Boards. 2 pp., Fireman's Herald, May 23.

High Pressure, Brooklyn's. Description of the electric-driven turbine pumps, 300 pounds pressure. Illustrated. 2 3-4 pp., Municipal Journal and Engineer, May 6.

Fire Pumps, Rotary and Steam. History, construction and installation. By Ezra E. Clark. Illustrated. 23 pp., Insurance Engineering, May.

GOVERNMENT AND FINANCE

City Government in Great Britain, Success of. Paper before Indianapolis Commercial Club. By Augustus L. Mason. 3 3-4 pp., Municipal Engineering, May.

Municipal Government, Elective Town Meetings as a Form of. By Alfred D. Chandler. 2 pp., Municipal Engineering, May.

Public Service Corporations, Control of Municipal. A symposium of the following papers. Annals of American Academy of Political and Social Science, May.

Boston Consolidated Gas Com-

pany; Its Relation to the Public, Its Employees and Investors. By J. L. Richards. 7 pp.

New York, Public Utilities Regulation in. By Henry Bruere. 17 pp.

Transit Control in New York City, Development of. By Henry C. Wright.

New Jersey, Restrictive Legislation Against Public Service Corporations in. By Frank Bergen. 12 pp.

Franchise Grants in New York City. By John J. Murphy. 7 pp.

New York State, Public Service Commissions of. By Horatio M. Pollock. 10 pp.

Philadelphia's Relation to the Rapid Transit Company. By Edwin D. Lewis. 12 pp.

District of Columbia, The Finances of. By W. F. Dodd. 18 pp.

New Orleans, Public Service Corporations of. By Solomon Wolff. 9 pp.

Chicago's Transportation Problem, Recent Phases of. By Willard E. Hotchkiss. 11 pp.

Chicago's Relation to Public Service Corporations. By Geo. C. Sikes. 6 pp.

Chicago New Charter Movement; Its Relation to Municipal Ownership. By Milton J. Foreman. 10 pp.

Control of Public Service Corporations in Detroit. By Delos F. Wilcox. 17 pp.

Electric Railways, Result of Further Legislative Regulation of. By John Blair MacAfee. 6 pp.

Moderation in Control of Public Service Corporations. By Wm. A. Bancroft. 2 pp.

The German Stadtetag. By Louis N. Robinson. 4 pp.

Public Service Laws of Wisconsin. Abstract of address before Chicago City Club. By Prof. B. H. Meyer, chairman Wisconsin Railroad Commission. 3-4 p., Electric Railway Review, May 9.

Corporations, Electrical and Gas, New York Public Service Commission's Method of Accounts for. 3-4 p., Electrical Railway Review, May 2.

Standard Accounting Conference. New York Public Service Commission and Corporations Agreement. 4 1-4 pp., Progressive Age, May 1.

Municipal Accounting. General discussion. By A. Kinnaird Tod. 1 p., Municipal Journal and Engineer, May 6.

Municipal Bond Sales During March. List of bonds, financial statistics, etc. 3-4 p., Municipal Journal and Engineer, May 6.

Taxation, Outline of a Model System of State and Local. Paper before National Municipal League. By Lawson Purdy. (Continued.) 6 pp., Midland Municipalities, May.

Local Taxation, Proposed Constitutional Amendment Exempting Public Service Corporations from All. To be voted on in California next November. By George H. Dunlop. 1 p., Pacific Municipalities, April.

Initiative and Referendum in the United States. Conditions in ten States. 3 1-2 pp., Pacific Municipalities, April.

STREET CLEANING**AND REFUSE DISPOSAL**

Street Cleaning and City Refuse Collection in New York. Abstract of report by Parsons, Hering and Whinery, comparing methods and costs of street sweeping. Illustrated. 5 pp., Municipal Journal and Engineer, May 13.

Street Sweeping, Cost of. Data from report of Parsons, Hering and Whinery.

1 1-4 pp., Engineering Contracting, May 6. Automobile Street Cleaner. German apparatus. Illustrated. 2-3 p., Revista Municipal, May 1.

City Wastes Disposal and Street Cleaning. General discussion by Paul Hansen, Assistant Engineer Ohio State Board of Health. 7 1-2 pp., Ohio Sanitary Bulletin, March.

Refuse Destructor at Seattle, Wash. Description of a 60-ton destructor. 2 1-4 pp., Engineering Record, May 2.

Cleveland Garbage Reduction Works. Description of operation and finances. 1 1-2 pp., Engineering Record, May 23.

PARKS AND OUTDOOR ART

Chicago Parks in Early May. Conditions of gardens and foliage. 1 1-2 pp., Gardening, May 15.

Outdoor Art at Railway Stations. "A Railway Floral Department." Illustrated. 2 pp., Canadian Municipal Journal, May.

Art as Applied to Cities. From North American Review. By Samuel Parsons and William R. O'Donovan. 1 1-4 pp., American Municipalities, May.

Beautifying Louisville, Ky. Plans proposed for this. Illustrated. 1 1-4 pp., American Contractor, May 2.

Rio de Janeiro, Transformation of. By Prof. L. S. Rowe. Illustrated. 2 1-4 pp., Revista Municipal, May 1.

TRAFFIC AND TRANSPORTATION

Subway, Market Street, Philadelphia. Method of construction technically described. 2 2-3 pp., Engineering Record, April 25.

Boston's Subway System, Washington Street Tunnel of. General plan and method of construction. Illustrated. 2 1-4 pp., Engineering Record, May 16.

Tunnel Under the Thames. Description of tunnel between Rotherhithe and Ratcliff. Illustrated. 3 pp., The Surveyor, May 1.

Cleveland Street Railways Leased to Municipal Traction Company. Details of lease. 1 1-4 pp., Electric Railway Review, May 2.

Cleveland Municipal Traction Company. Commencement of its operation. 3-4 p., Street Railway Journal, May 9.

Street Cars of Warsaw, Russia. New electric line. 1-2 p., Consular and Trade Report, May 21.

MISCELLANEOUS

Descriptions of Cities. "Baltimore, the Metropolis of the South." Commercial, political and social history. Profusely illustrated. By Herbert N. Casson, 23 pp., Munsey's, June.

Baltimore, Maryland. General description. Illustrated. 2 1-4 pp., Revista Municipal, May 15.

Mobile, Ala. Editorial correspondence from. Illustrated. 1 p., Municipal Journal and Engineer, May 20.

Birmingham, Ala. Editorial correspondence from. Illustrated. 1 1-4 pp., Municipal Journal and Engineer, May 20.

Municipal Works at Eccles, Eng. Streets, scavenging, sewage farm, etc. By Thos. S. Picton, Borough Engineer. Illustrated. 9 1-2 pp., Contract Journal, May 13. 4 3-4 pp., The Surveyor, May 15.

Recent Municipal Works at Wimbledon, England. Tramways, sewage pumping, electric lighting, etc. By C. H. Cooper, Borough Engineer, and H. Tomlinson-Lee. 4 1-4 pp., The Surveyor, May 8. Illustrated, 7 pp., Contract Journal, May 6.

Regrading of Seattle, Wash. Extensive description of enormous work being undertaken in that city. Illustrated. 3 3-4 pp., Engineering Record, May 9, 16.

Street Plan of Point Gray. Plan for residence suburb of Vancouver. Illustrated. 3-4 p., Municipal Journal and Engineer, May 20.

Rebuilding Cities. Editorial suggested by Chelsea fire. 3-4 p., American Contractor, May 9.

Exhibition. Municipal Building and Public Health. Opening exercises, materials exhibited, etc., at London. Illustrated. 8 pp., The Surveyor, May 8. 1-4 p., Municipal Journal and Engineer, May 15.

Municipal Fire Insurance. Paper before Union of British Columbia Municipalities. By Alderman Wilson. 2 1-2 pp., Canadian Municipal Journal, May.

Social Unrest, Chicago Settlements and. By Jane Addams. 12 pp., Charities, May 2.

The Saloon in New York. By Arthur H. Gleason. 2 pp., Collier's, May 2.

Relief of the Unemployed. Methods in many cities. "Out of a Job." By Arthur Ruhl. Illustrated. 2 pp., Collier's, May 9.

Law and Order. Paper before Union of British Columbia Municipalities. By Mayor Bell. 1 1-2 pp., Canadian Municipal Journal, May.

Salaries in Small Urban Districts. Discussion of paper by Dr. Reginald Farrar. 1 p., The Surveyor, May 1.

Ambulance Service in Our Great Cities. Its haphazard character. By Robt. D. Heinl. Illustrated. 1 p., Leslie's Weekly, May 7.

Reinforced Concrete in Municipal Engineering. By W. Noble Twelvetees. 3-4 p., Local Government Journal, May 9.

Reinforced Concrete in Municipal Engineering. Reservoirs, aqueducts, sewers, etc. By Ernest R. Matthews. Illustrated. 3 pp., Water, April 15.

Pipe, Concrete, Cost of Making. Results on Shoshone irrigation project. 1-4 p., Cement and Engineering News, April.

Cement and Clay Pipe. Experiments on their strength by students of Iowa State College. By Prof. A. Marston. 1 3-4 pp., Municipal Journal and Engineer, May 27.

Bridges, Concrete Highway. Some advantages. Illustrated. 1 p., Municipal Journal and Engineer, May 13.

Walnut Lane Bridge, Philadelphia. 233-foot span concrete bridge in Fairmount Park. Illustrated. 2 1-2 pp., Good Roads, April.

Overhanging Sidewalks. Reinforced concrete brackets under skew sidewalks, New York, New Haven & Hartford Railroad, at New Haven. Illustrated. 2-3 p., Engineering News, April 30.

Height of Buildings. Suggestion for building made by Ernest Flagg. 2 3-4 pp., Insurance Engineering, May.

Smokeless Fuel. Lecture before Society of Arts. By Prof. V. B. Lewes. 3 1-4 pp., Progressive Age, May 1.

Electrolysis Surveys of Gas and Water Pipes. Paper before American Gas Institute. By Albert F. Ganz. 1 3-4 pp., Engineering Magazine, May.

Cost Data, The Use and Abuse of. By W. W. Hatch. 3-4 p., Engineering News, April 30.

Water Bureau Investigation. Synopsis of recent investigation, defending administration. 1 3-4 pp., Chicago Real Estate News, May.

Oyster Beds on Mainland Shores. Methods of Surveying. Address before Engineers' Club of Baltimore. By Swenson Earle, Chief Engineer Maryland Shellfish Commission. 3-4 p., Engineering News, May 21.

TRADE NOTES

Exhibition at American Water Works Association Convention.—At the Washington Convention of the American Water Works Association, May 11 to 16, there was given by the Associate Members an excellent exhibition of water works appliances which was extremely interesting and valuable and which seemed to attract fully as much attention from the superintendents and others present as did the reading of papers. This exhibition occupied one large room immediately adjacent to the Convention Hall and two small rooms connected with these. It is impossible to do full justice to the displays made by the exhibitors, but in brief these are as follows:

The Hersey Manufacturing Company showed a very complete and attractive display of water meters, including the Hersey detector meter.

The Thomson Meter Company displayed several samples of their Lambert meters in various sizes.

The National Meter Company had a large exhibit containing samples of their Nash, Empire and Crown meters. Also a 12-inch Premier meter and electric recording apparatus for the same. Photographs of Nash gas engines gave an idea of this branch of the firm's activity.

The Union Water Meter Company exhibited several samples each of their Union, Columbia and King water meters.

The American Valve and Meter Company showed their Acorn, Disk and Cincinnati Piston meters.

The Henry R. Worthington Company showed examples of their meters and the various parts going into the make-up of the same.

The Pittsburg Meter Company showed several sizes of their Keystone and Eureka water meters.

The Buffalo Meter Company's exhibit contained Niagara and American water meters in several sizes.

A 6-inch Venturi meter and their standard registering apparatus were shown by the Builders Iron Foundry.

The Neptune Meter Company had an extensive display of Tri-cent meters of all sizes from 6-inch down.

The Pitometer Company showed a complete outfit for the use of the Cole-Flad pitometer, with photographs showing installations in various places.

Brass goods and plumbers' supplies generally were shown by a number of houses.

The Hays Manufacturing Company showed corporation cocks, curb cocks and boxes, a new inverted key curb cock, solder nipples, sill cocks; the Foley ventilator and clean out for house connections (which is specified for Washington connections). Their motto is "The goods that please." They were represented by Vice-President O. G. Hitchcock, O. W. Gregg, Eastern Sales Agent, and T. J. Nagle, western sales agent. The last named sailed last week for a two months' vacation in his native land.

Glauber Brass Goods of all kinds which could possibly be required by the plumber or water works engineer, were shown in abundance. The faith of this firm in its goods is indicated by their motto, "A five year guarantee."

The A. P. Smith Manufacturing Company showed, besides a full line of brass goods, pipe cutting and tapping machines, steam operated calking machines, lead furnaces containing many advantages over the old style furnaces and other specialties for which their house is well known.

The H. Mueller Manufacturing Company occupied one of the small rooms above referred to, where was given a very extensive display of water, gas and plumbing brass goods, including most of the articles listed above. They also showed a full-sized pipe derrick for handling large water pipes, a pipe tapping machine, calking tools, etc. Also a water meter tester which the firm has recently perfected for the market.

Jenkins Brothers showed a very full outfit of Jenkins Valves, packing and pump valves.

The Anderson Coupling Company showed samples of the Anderson patent lead pipe coupling.

The Lead Lined Iron Pipe Company had a number of samples of their pipe and sections of the same, with special couplings, etc.

The Modern Iron Works showed a number of service boxes manufactured by them, including the Quin See, Peerless and Buffalo patterns.

The Kennedy Valve Company displayed a

considerable number of gate and globe valves ranging in size from one to six inches. Howard S. Roberts, besides furnishing literature concerning the Roberts three-way and four-way valves, had samples of the same on exhibition.

The Clark Meter Box was very much in evidence, as was also the Ford Meter Box, full-sized samples of both being on exhibition.

The Ross Valve Manufacturing Company showed their pressure regulations and also feed water filters.

The Fairbanks Company had on exhibition a number of valves and fire hydrants of their manufacture.

The Water Works Equipment Company exhibited a pipe jointer, a tapping machine and pipe sleeve. They have recently introduced a machine for thawing frozen hydrants and service pipes of which they are quite proud.

The L. M. Booth Company displayed a number of interesting photographs of their water-softening outfit, including that at McKeesport.

The Water Works Supply Corporation make a specialty of furnishing sand for water and sewage filters and similar purposes and showed jars of many grades of this.

The East Jersey Pipe Company, represented by E. E. Mentzer, displayed life-size samples of their lock-bar pipe which they have introduced during the last year or two.

The Wyckoff Supply Company showed samples of their wood stave pipe, the largest being 30 inches in diameter; a bored pipe 8 inches in diameter bound with iron straps and in good condition, although in use since 1861; also an old bored log of 1804.

The United Lead Company presented to the members samples of their lead wool and displayed several sections of pipe showing joints made with this material.

The Watkins patent pipe jointer was shown in its several sizes, and its advantage over not only clay rolls but other pipe jointers were expounded.

The Standard Asphalt and Rubber Company showed several samples of their Sarcoc coatings and dip for steel pipes, reservoir water proofing, etc.; also asphalt filler for brick and other paving; also this material used for floors and roofing. The company was represented by its treasurer, W. A. Levering, J. R. Balk and G. D. Carr, the New York representative.

The National Water Main Cleaning Company showed samples of pipe badly choked with tubercles cut from mains which they had cleaned. Also a 4x4-inch log taken from a 6-inch main at Far Rockaway.

The Canos Manufacturing Company made a full display of their Black Squadron packing, whose name they have made so well known. They were represented by Geo. M. Costello, President, and several salesmen.

The Allis-Chalmers Company, on account of the size of their product—pumps—could show only photographs of these and distributed literature setting forth their merits.

The Roth Manufacturing Company had a working model of their Columbus Impeller pump, which is used for deep well pumping; the model being driven by a small electric motor.

The Walter Macleod Company, represented by W. F. Stodder, made interesting exhibition of their Buckeye light, their heaters for melting lead pipe joints and lead furnaces for making such joints; all these using gasoline or similar material for their heat.

The MUNICIPAL JOURNAL AND ENGINEER and *Fire and Water* each displayed samples of their paper, the former being represented by G. E. Sly, Business Manager, and A. Prescott Folwell, Editor; the latter by F. W. Shepperd, Editor. *Engineering News* was represented by Editor M. N. Baker and *Engineering Record* by Associate Editor E. J. Mehren.

The Chapman Valve Mfg. Co. was represented at the convention by Herbert E. Stone. The Rockwell Engineering Co. by Wm. H. Fitch. Geo. T. Hodgkinson, Manager of the Filtration Dept., represented the American Water Softener Co. John H. Decker, General Manager of the Atlantic Construction and Supply Co., was among those present. Clement Re-stein Co., whose Belmont packings and steam and tank hose were lauded by Norman B. Miller, will send an artistic watch fob to all water works engineers and superintendents who write for the same to their office, 143 North Second street, Philadelphia.

Cast Iron Pipe.—Quite a large number of orders have been placed recently, but there is no change in prices. Quotations: 4-inch, \$27; 6 to 12-inch, \$26; 16-inch and up, \$25. Birmingham: The aggregate of small orders to be placed in the next thirty days is estimated at 85,000 tons. The decline in price seems to have been effectually checked. Quotations: 4 to 6-inch, \$23; 8 to 12-inch, \$22; over 12-inch, average \$21. New York: The general demand is much improved. Quotations: Carload lots, 6-inch, \$24 to \$24.50.

Pig Lead.—The price has been advanced to 4.35c., New York. Considerable lead is in the hands of speculators, who have purchased at lower prices. Lead in St. Louis is quoted at 4.20 to 4.30c.

Contractor's Plant.—The United States Equipment Co., Fisher Building, Chicago, Ill., has recently been organized and taken over the entire contractor's plant and equipment of MacArthur Bros. Co., of Chicago and New York. They will do a general business of buying and selling and leasing plants and equipment. The incorporators of the new company are John R. MacArthur, Arthur F. MacArthur, Herbert E. Reagan, John Everett and John R. Turner. This company is now ready to supply contractors with equipment of any kind from small grading jobs up. The new company has taken over the repair shops of MacArthur Bros. Co. at McCook, Ill., where it will repair and rebuild machinery.

Dump Wagon.—The F. W. Hieber Wagon Mfg. Co., Pittsburg, Pa., has published a very handsome brochure describing and illustrating the peculiarities and merits of the company's bottom dumping wagons. Marginal illustrations showing the wagon being loaded by means of large buckets handled by steam excavators serve to impress the readers with one of the main contentions of the manufacturers, that they make a wagon of exceptional strength.

Cement Prices.—Officials of the Association of American Portland Cement manufacturers, offices No. 1233 Land Title Building, have denied a report emanating from Chicago, that a rate-cutting war had been inaugurated among the cement manufacturers with a view to putting smaller concerns out of business and greatly reducing prices. So far from a condition of internecine war existing among its members, who comprise 90 per cent. of the cement manufacturers of the country, all was reported to be harmony among them. "It has never been the aim of our association," said John B. Lober, the president, "to in any way regulate prices. We organized in 1902, and for some time the association was confined to the East, but in late years all but a few of the Western manufacturers have joined us. It is entirely false that there has been a recent row in our association. The members have always been free to fix their own prices, and we have never attempted to regulate them. The competition between cement producers and other material men is so keen and the demand has increased so rapidly that it would not have been possible at any time to control prices. The ingredients necessary to make Portland cement are found in almost every State in the Union, and there is probably no other line in which a monopoly of the product is so difficult. The only truth in the Chicago report is that prices for cement will probably range lower in June than in recent months, but this is due to prevailing trade conditions, and not to any greater competition than has existed among us for years."

NEWS OF THE SOCIETIES

American Society of Municipal Improvements.—The next convention of this society will be held at Atlantic City, N. J., on October 20 to 23, and not October 13 to 16 as was stated in the Proceedings of the society published a few months ago. This change of date was made necessary by the fact that the one first published—which is the regular time for the convention of this society—had been previously selected by another large society as the time for holding their convention at Atlantic City, and arrangements already made by it with the hotels, etc., would have interfered with the success of the A. S. M. I. convention. The headquarters will be the Hotel Dennis, where will be held the meetings and an exhibition of municipal appliances. This hotel is on the "Boardwalk" and ocean beach, and one of the finest at this resort famous for its comfortable hotels. Indications already abound that this will be the most successful convention the society has ever held, and that the increase in membership this year will exceed any previous record.

League of American Municipalities.—Hugo S. Grosser, formerly City Statistician of Chicago, Ill., presided over the Committee on Uniform Municipal Reports of the League which assembled in the library of the New Willard, Washington, D. C., May 22. The meeting was called to discuss uniformity in municipal reports, which, it is stated, "is a thing devoutly to be wished for, as only with uniform reports are we enabled to draw just and equitable comparisons between various cities of the country, and thus from the experience of other cities derive benefit." The first speaker was L. G. Powers, Chief Statistician of the Bureau of the Census, who discussed the problem of obtaining uniformity at some length. F. A. Cleveland, Statistician of New York, also discussed the subject. Other matters were also considered bearing on the subject. The list of those in attendance includes: Hugo Grosser, Chairman, Statistician, Chicago, Ill.; George M. Rex, Auditor, Pawtucket, R. I.; Louis Betz, Controller, St. Paul, Minn.; Thomas H. Pratt, Controller, Lincoln, Neb.; J. O. Lee, Controller, Charleston, N. C.; L. G. Powers, Statistician, Washington, D. C.; H. W. Cheadle, Controller, Duluth, Minn.; Fred W. Martin, Controller, South Bend, Ind.; F. A. Cleveland, Statistician, New York; I. B. A. Taylor, Auditor, Middletown, N. Y.; G. C. Gaston, Auditor, Detroit, Mich.; John Mawdsley, Auditor, Adrian, Mich.; Lyman C. Hughes, Controller, Newcastle, Pa.; Harry F. Hooper, Controller, Baltimore, Md.

Minneapolis Engineers Club.—New quarters have been secured for the use of the club in the Warner Building.

International Association for the Prevention of Smoke.—The second annual convention will be held at Milwaukee, Wis., June 26-28, in the Council Chamber, City Hall. The program as announced is as follows:

June 26, 10 a. m.—The convention will be called to order by President John Fairgrieve. Welcome by the Mayor of Milwaukee. Response by President John Fairgrieve, Smoke Inspector, Detroit, Mich. Response in behalf of the Society by Secretary-Treasurer R. C. Harris, Property Commissioner, Toronto, Canada. Roll Call of Active Members. Roll Call of Associate Members. Application for New Membership.

Afternoon Session, 2 p. m.—Report of Standing Committees. Unfinished Business. Evening Session, 8 p. m.—Pabst Theater Hall, third floor, corner East Water and Oneida streets. "Boiler Room Economy," il-

lustrated lecture, through courtesy of the Under-Feed Stoker Company of America. "The Public Right to Pure Air," by William J. Zimmers, Milwaukee.

June 27, 9 a. m.—Ladies Meet at Headquarters. Visit to Layton Art Gallery and Public Museum.

Morning Session, 9:30.—New Business. Discussion. Questions for discussion should be deposited into the "question box" for that purpose.

Afternoon.—Boat ride to Whitefish Bay. Supper at bay, returning by car to Wonderland. Boat will leave at Grand avenue bridge.

June 28, 9 a. m.—Ride from headquarters to see the city and places of interest.

Afternoon Session, 2 p. m.—Election of officers. Proposals and vote on convention city, June, 1908. Farewell address by R. C. Harris.

American Society for Testing Materials.—At the eleventh annual meeting of the society, June 23-27, at Atlantic City, N. J., the following papers bearing on municipal topics will be presented:

"The Acceptance of Stone for Use on Roads Based on Standard Tests," R. S. Greenman; "Fuel Investigations, Geological Survey," J. A. Holmes; "The Structural Timbers of the Pacific Coast," R. Thelen; "The Relative Corrosion of Steel and Wrought Iron Water Pipes," H. M. Howe; "Electrolysis and Corrosion," A. S. Cushman; "Results of Tests of Steel Columns and Results of Work on the Metallurgy of Steel in Progress at Watertown Arsenal," J. E. Howard; "The Influence of the Absorptive Capacity of Bricks Upon the Adhesion of Mortar," Henry Fay; "Sands—Their Relation to Mortar and Concrete," H. S. Spackman and R. W. Lesley; "Permeability Tests of Concrete with the Addition of Hydrated Lime," S. E. Thompson; "An Important Consideration Concerning Cement Analysis," S. F. Peckham; "The Fireproof Qualities of Concrete," R. F. Tucker; "Some Methods and Records Used in the Laboratory for Testing Cement and Other Materials for the Subway and Elevated Railway in Philadelphia," S. A. Brown; "The Influence of Fine Grinding on the Physical Properties of Portland Cement," R. R. Meade.

Architectural Exposition.—The first annual national architectural exposition will be held during the week of September 14 to 19 at Madison Square Garden, New York City. By the combination and cooperation of all departments in architecture, engineering, painting, sculpture, the trades, manufacturing and craftsmanship pertaining to the construction, equipment and decoration of buildings as well as landscape and garden effects, this, it is stated, will be a radical departure from the usual form of exhibitions. The cement section will contain the largest collection of exhibits ever seen in New York City.

Calendar of Meetings

June 2-4. Michigan State Firemen's Association.—Annual convention, Ludington, Mich.

June 2-7. International Association of Chiefs of Police.—Fifteenth annual convention, Detroit, Mich.—Major Richard Sylvester, President, Washington, D. C.

June 3. American Society of Civil Engineers.—Regular meeting at the House of the Society, 220 West Fifty-seventh street, New York City.—Charles Warren Hunt, Secretary.

June 9. Municipal League of New Jersey.—Conference to perfect organization.—Mayor Andrew F. McBride, Paterson, N. J., Chairman of Committee.

June 9-10. Minnesota State Fire Department Association.—Thirty-sixth annual convention, Mankato, Minn.—N. Kleinschmidt, President; D. L. Kane, Secretary.

June 17. North West Ohio Volunteer Firemen's Association.—Thirty-fifth annual convention, Napoleon, Ohio.—J. H. Polher, Secretary.

June 23-26. American Society of Civil Engineers.—Annual convention, Denver, Col.—Charles Warren Hunt, Secretary, 220 West Fifty-seventh street, New York City.

June 23-26. American Society of Mechanical Engineers.—Annual convention, Detroit, Mich.—C. W. Rice, Secretary, 29 West 39th street, New York City.

June 23-26.

Society for the Promotion of Engineering Education.—(In connection with the convention of the American Society of Mechanical Engineers). Convention, Detroit, Mich.—A. L. Williston, Pratt Institute, Brooklyn, N. Y.

June 23-27.

American Society for Testing Materials.—Annual meeting, Hotel Traymore, Atlantic City, N. J.—Edgar Marburg, Secretary, University of Pennsylvania, Philadelphia, Pa.

June 24-25.

Indiana State Board of Health—General Conference, Indianapolis, Ind. Dr. J. N. Hurty, Secretary.

June 29-July 2.

American Institute of Electrical Engineers.—Annual convention, Atlantic City, N. J.—Ralph W. Pope, Secretary, 33 West Thirty-ninth street, New York City.

July 24-25.

American Society of Heating and Ventilating Engineers.—Summer meeting, Niagara Falls, N. Y.—W. M. Mackay, Secretary, P. O. Box 1818, New York City.

August 25-28.

International Association of Fire Engineers.—Annual convention, Columbus, O.—James McFall, Secretary, Roanoke, Va.

September 21-October 12.

National Association for the Study and Prevention of Tuberculosis.—International Congress, Washington, D. C.—Dr. Henry Barton Jacobs, Secretary, Baltimore, Md.—Dr. Joseph Walsh, Philadelphia, Pa. Special Secretary of the Committee on the International Congress.

September.

New Jersey State Firemen's Association. Annual meeting, Atlantic City, N. J.—William Exall, Secretary, 11 Howard street, Newark, N. J.

October 11.

International Roads Congress.—First convention, Paris, France.—President Lethier, l'Inspecteur General des Ponts et Chaussees.

October 20-23.

American Society of Municipal Improvements.—Fifteenth annual convention, Hotel Dennis, Atlantic City, N. J.—A. Prescott Folwell, Secretary, 511 Flatiron Building, New York City.

November 17-20.

National Municipal League.—Annual meeting, Pittsburgh, Pa.—Clinton Rogers Woodruff, Secretary, 705 North American Building, Philadelphia, Pa.

PATENT CLAIMS

888,481. Liquid Meter. Rudolf Fritsch, Oberlössnitz, near Dresden, Germany. Serial No. 334,299.

A liquid meter, comprising, in combination, a cylindrical casing provided in its interior with grooves, a piston provided with grooves and apertures, the said piston situated inside the casing and prevented from turning by a pin, a piston valve provided on its circumference with grooves, the said piston valve situated inside the piston, the cylindrical casing being provided with a slot, a ratchet wheel projecting through the slot, a spring fixed to the piston, said spring adapted to transmit the motion of the piston to the ratchet wheel, a spring fixed to the casing, said spring adapted to prevent the ratchet wheel being moved backwards, substantially as described and shown and for the purpose set forth.

888,609. Road Drag and Harrow. Hamilton D. Guffey, Unionville, Mo. Serial No. 384,394.

In a combined road grader, drag and harrow, a draft device and means whereby said device is connected to the grader to automatically shift the direction of the latter, substantially as described.

888,662. Means for Handling Paving Blocks or Bricks. James Sheridan, Franklin, Pa. Serial No. 402,886.

In an apparatus for handling blocks or bricks, the combination with a frame of means for clamping a series of blocks or bricks therein both transversely and longitudinally, and means for operating all of said clamping means simultaneously.

888,864. Road and Process of Making Same. Bennett N. Beard, Shelton, Conn. Serial No. 413,271.

The process of making roads, which consists in preparing a sub-stratum, then placing thereon an upper stratum of relatively small stones, then top-dressing the same with sand and then sprinkling with a thin mixture of water and cement held in mechanical suspension.

888,886. Pavement and Method of Making the Same. William S. Houghton, Boston, Mass. Serial No. 394,092.

A pavement, consisting of a single layer or course of a mixture of crushed or broken stone, sand and cement in such proportions as to leave voids, the pieces and fragments of said mixture being coated with bituminous material and compacted and bonded together into a single homogeneous layer or course, the voids in said course being occupied by a cement mixture.

888,887. Pavement or Roadway and Method of Making Same. William S. Houghton, Boston, Mass. Serial No. 394,093.

A pavement, consisting of a foundation layer of crushed or broken stone, the pieces of which lie closely together in a compact mass having a smooth upper surface, the voids in the lower portion of said layer being occupied by a cement mixture which binds all of the pieces of the layer into a monolithic mass, and a wearing layer anchored to the upper portion of the foundation layer by filling the upper voids thereof and being integral with the body of the wearing layer.

889,162. Arc Lamp. William S. Weedon, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Serial No. 208,923.

In an arc lamp, a pair of co-operating electrodes, a feeding mechanism therefor for causing one or more relative approaching movements of said electrodes followed each by a relative separating movement, each approaching movement exceeding and each separating movement equaling the normal arc length, said feeding mechanism including means for causing the successive approaching and separating movements being continued until the electrodes engage.

INCORPORATIONS

Aerial Tramway Company, Charleston, W. Va.; to build and operate aerial tramways and hold patent rights thereto; capital, \$1,000,000. Incorporators: Harry Frazier, D. C. T. Davis, Lewisburg, W. Va., and others.

American Concrete Company, New York, N. Y.; real estate, building, manufacture drain and sewer pipe, etc.; capital, \$10,000. Incorporators: Raymond D. Druhan, 21 Park row; Frank B. Vermilyea, 5 Nassau street, both of New York; Gaylord W. Hulet, Newark.

Aurora Slag and Ballast Company, Moline, Ill.; to operate a stone quarry; capital, \$10,000. Incorporators: Cyrus E. Dietz, George Dietz, John H. Wallace.

Ausable Forks Granite Company, Ausable Forks, N. Y.; to quarry granite and stone; capital, \$150,000. Incorporators: William W. Carnes, Edward W. Featherstone, Ernest Le Blond, Ausable Forks, N. Y., and others.

M. W. Forney Company, New York, N. Y.; contractors, buildings, bridges, roads, etc.; capital, \$10,000. Incorporators: John B. Pruyn, 326 West Eighty-third street; Arthur J. Mackey, 2 Rector street, both of New York; L. Kent, 486 Decatur street, Brooklyn.

General Contracting Company, Wilmington, Del.; capital, \$50,000. Incorporators: Robert C. Patterson, Richard H. Roughen, John A. Cullen, Pittsburg, Pa.

Navastota Light and Power Company, Navasota, Tex.; capital, \$20,000. Incorporators: R. A. Horloch, W. R. Horloch, and E. A. Harris.

Robinson & Randle, Inc., New York, N. Y.; to deal in tile, ceramic products, concrete and concrete machinery; capital, \$12,000. Incorporators: Clement G. Randle, 38 West Twenty-fifth street, New York; George C. Robinson, 72 Hicks street, Brooklyn; Richard D. Sutton, Babylon, N. Y.

Seagirt Water Company, Asbury Park, N. J., to operate water works in Seagirt; capital, \$50,000. Incorporators: Charles L. Noble, Yonkers; Horace A. Rounds, New York; Frank Durand and Charles Roberts, Manasquan, N. J.; Frank Osborn, Middletown, N. J.; Harvey B. Blakey and Francis C. Baird, Seagirt, N. J.

Storage Battery Lighting Company, Augusta, Me.; storage batteries; capital, \$1,200,000. President, E. E. Newbert; treasurer, J. Berry, both of Augusta; clerk, M. H. Simmons, Hallowell.

United Bluestone Quarries Company, New York, N. Y.; to operate stone quarries; capital, \$100,000. Incorporators: Joseph Hayes, 18 Wall street; James B. Laux, 11 Broadway, both of New York; Arthur S. Hubbard, Newark, N. J.

Wood River, East Alton and Bunker Hill Traction Company, 11 North Main street, East St. Louis, Ill.; to operate a railway from Wood River to Gillespie, Ill.; capital, \$150,000. Incorporators: R. M. Smith, S. B. Knepper, B. A. Campbell.

PERSONALS

BINGHAM, CLARENCE A., Jun. Am. Soc. C. E., Wilmington, Del., has been appointed Borough Engineer of Carlisle, Pa. Mr. Bingham will also conduct a private practice in connection with his new position.

CROSBY, W. W., Engineer of the Highway Division of the Maryland Geological and Economic Survey, has been elected Chief Engineer of the new Maryland Good Roads Commission by Governor Crothers and the members, and will combine the two; Carville D. Benson has been elected Counsel of the Commission.

ELLIOTT, W. H., Chief of the Fire Department of New Berlin, N. Y., has been re-elected.

GLEASON, T. C., Ware Mass., has been elected Chief of the Fire Department.

HORTON, H. G., City Engineer of Springfield, Mo., has been re-elected.

KYD, JAMES H., has been appointed City Engineer of Butte, Mont., succeeding Alex. Leggett.

LESCHE, HARWOOD, of Elyria, O., has been appointed Assistant Engineer in the Ohio State Highway Department.

LOVE, GEORGE C., President of the lower board of the City Council of Memphis, Tenn., officiated as Acting Mayor recently when Mayor James H. Malone went to Nashville to attend the annual meeting of the State Bar Association, and Vice Mayor Walsh was also absent from the city.

LUDLOW, J. L., of Winston, N. C., has been retained by the city of Charleston, N. C., to conduct a series of investigations on the water of Goose Creek.

MACHEMER, CARL C., Civil Service Commissioner of Buffalo, N. Y., has been appointed Fire Commissioner by Mayor J. N. Adams, for a six-year term to succeed Russell H. Potter, at \$500 per annum, and will continue as a member of the Railroad Terminal Committee appointed by the Mayor, but will give way on the Civil Service Commission to Richard L. Wood, a new appointee.

MACKENZIE, ALEXANDER, Chief of Engineers, U. S. Army, recently retired with the rank of Major General, and Col. Thomas W. Symons has been chosen for the position.

MATHEWS, H. D., Mayor of San Jose, Cal., was defeated for reelection, receiving but 62 votes, to Charles W. Davison, his successful opponent, who received 2818, while S. G. Tompkins received 1930 votes; City Clerk Roy E. Walter was reelected over John T. Gately, while Charles J. Lightson was elected Treasurer and Dan J. McGrath and A. L. Whitman as Councilmen. Mayor Mathews some weeks ago announced that he could not be a candidate for reelection, as business matters had arisen which will probably call him away from the city permanently.

PERRY, A. P., Jr., is now Chief of the Fire Department at Rockdale, Tex.

PORTER, ROBERT C., has been appointed Chief of the Wilmington, Del., Fire Department.

PLUM, CARL E., City Engineer of Elgin, Ill., has been reappointed.

ROBERTSON, J. ROSS, City Engineer of Keokuk, Ia., has been reelected.

STEPHENSON, A. T., Mayor of Enid, Okla., Water Commissioner F. W. Brooks and Councilman W. H. Hills were recently indicted by the Grand Jury, the first two being charged with padding warrants, and the Councilman with making unlawful contracts with the City Council while a member of the body.

STOCKER, EUGENE D., has been appointed Chief of the Cooperstown, N. Y., Fire Department.

THE WEEK'S CONTRACT NEWS

Relating to Municipal and Public Work—Street Improvements—Paving, Road Making, Cleaning and Sprinkling—Sewerage, Water Supply and Public Lighting—Fire Equipment and Supplies—Buildings, Bridges and Street Railways—Sanitation, Garbage and Waste Disposal—Police, Parks and Miscellaneous—Proposals and Awards

To be of value this matter must be printed in the number immediately following its receipt, which makes it impossible for us to verify it all. Our sources of information are believed to be reliable, but we can not guarantee the correctness of all items. Parties in charge of proposed work are requested to send us information concerning it as early as possible; also corrections of any errors discovered.

BIDS ASKED FOR

STATE	CITY	RECEIVED UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
Street Improvements				
New York	Brooklyn	June 3, 11 A.M.	Asphalt paving, grading, etc.; also cement walks	Bird S. Coler, Boro. President.
New York	New York	June 3, 11 A.M.	Reg. and grading above high water, Shell road, Gravesend	Com'rs, C. L. F., Cr. of The Mayor.
Ohio	Columbus	June 3, noon	Macadamizing, etc., Bagshaw pike, Truro & Mifflin twps.	F. M. Sayre, County Auditor.
Illinois	Belleville	June 3, 3 P.M.	Vet. brick paving, 6,000 sq. yds.; sewer, 20,000 ft.; curb, 40,000 ft.	Fred J. Kern, Mayor.
Indiana	Logansport	June 4, 10 A.M.	Constructing road between Cass & Miami Cos.	Geo. W. Cann, County Auditor.
Illinois	Chicago	June 4, 10:30 A.M.	Asphalt paving, 13 contracts: vit. brick, 5; blast furnace slag, 3; limestone, 1, and granite block, 1	C. A. V. Standish, Sec'y B. L. Imp.
Missouri	Kansas City	June 4, 11 A.M.	Art. stone sidewalks, 10 sts.; art. stone curb, 2 sts.	E. A. Harper, City Engineer.
Indiana	Frankfort	June 4, 2 P.M.	Constructing eight gravel roads	Charles F. Cromwell, Co. Auditor.
Pennsylvania	Ligonier	June 4, 5 P.M.	Curbing S. & N. Market St., & Pub. Sq., 6,000 lin. ft.	E. C. Ramsey, Boro. Clerk.
New Jersey	Prospect Park	June 4, 7:30 P.M.	Grading, curbing, macadamizing, N. Ninth St.	Wm. Ferguson & Son, Paterson, C.E.
New Jersey	Hawthorne	June 4, 8 P.M.	Grading and macadamizing, 3 sts.	F. J. Renz, Mayor.
Indiana	Muncie	June 4	Bldg. brick road, Wheeling road; gravel road, Center twp.	Jos. E. Davis, County Auditor.
Indiana	Tipton	June 5, 10 A.M.	Constructing 2 gravel roads, 12,100 ft. long	J. E. Barlow, County Auditor.
Ohio	Alliance	June 5, noon	Paving, curb, sewer, etc., Patterson & S. Lincoln Ave.	C. E. Swearingen, Clk. Bd. Pub. Ser.
Virginia	Jonesville	June 5, noon	Constructing 5 miles of macadam road	Rob't L. Pennington, Sec'y H'y C'm.
Indiana	Brookville	June 5, 1 P.M.	Constructing 11,950 ft. of road	Chas. A. Miller, County Auditor.
Pennsylvania	Harrisburg	June 5	Bldg. 4 State roads, Chester Co., 48,920 ft. long	Jos. Hunter, St. Hwy. Com'r.
New York	Fort Niagara	June 6, 10 A.M.	Constructing concrete walks at post	Constructing Quartermaster.
Wisconsin	Racine	June 6, 10 A.M.	Grading Yout and N. Michigan Sts.	P. H. Connolly, Chm. Bd. Pub. Wks.
Indiana	Crawfordsville	June 6, noon	Improving Jarvis road in Brower township	B. B. Engle, County Auditor.
Indiana	Delphi	June 6, 1 P.M.	Constructing 15,751 ft. macadam and 4,752 ft. gravel road	M. G. Haun, County Auditor.
Rhode Island	Tiverton	June 6, 1 P.M.	Constructing 1 mile of macadam on Crandall road	Town Clerk.
New Jersey	Camden	June 8, 11 A.M.	Macadamizing .483 miles of road	J. J. Albertson, County Eng.
New Jersey	Cape May, C. H.	June 8, noon	Constructing 4,264 miles gravel road	R. Rendall Smith, Co. Eng., Ocean C.
New Jersey	Newark	June 8, 3 P.M.	Grading and telford macadam paving, several roads, inc. 14,934 ft.; also one 11,162 ft. long	James Owen, 196 Market St., C. E.
New York	Mt. Kiskoe	June 8, 3:30 P.M.	Macadamizing, grading, etc., 3.3 miles of road	Joseph E. Merriam, Town Clerk.
Pennsylvania	Latrobe	June 8, 8 P.M.	Grading, 9600 cu. yds. excavation; 8,000 lin. ft. stone curb; 13,800 sq. yds. brick or asphalt block, S. Ligonier St.	Jas. C. Dursler, Sec'y Council.
Indiana	Crawfordsville	June 8	Paving 5 blocks on College, Water and Walnut Sts.	B. R. Johnston, City Engineer.
Indiana	Wabash	June 8	Constructing cement walks on certain streets	Fremont McLees, City Clerk.
Idaho	Hailey	June 8	Constructing cement sidewalks; plans Vil. Eng'r.	Village Clerk.
North Dakota	Cooperstown	June 8	Filling approach to bridge in Washburn township	H. A. Sundin, Clk. Town Board.
Kentucky	Paducah	June 9, 3 P.M.	Paving, any material, 10,000 sq. yds.; 3,800 cu. yds. excav.	L. A. Washington, City Engineer.
Indiana	Cambridge City	June 9, 7:30 P.M.	Cement walks, 17,000 sq. ft.; cement curb and gutter, 2,500 lin. ft.; reset stone curb, placing 2,000 lin. ft. cement gutter; storm sewer under Main St. and grading st.	Charles Brossmann, C. E., Union Trust Bldg., Indianapolis.
Indiana	Portland	June 9	Constructing 8 gravel and 6 stone roads	County Auditor.
Washington	Spokane	June 10, 2 P.M.	Improving Sprague Ave. from Ivory St., 785 ft. west	J. T. O'Brien, Sec'y Bd. Pub. Wks.
Ohio	Lorain	June 10	Surfacing Tenth Ave. with slag	A. W. Thomas, Clk. B. P. S.
Ohio	Port Clinton	June 10	Brick or other material on concrete, Canal St.	J. J. Huber, Clk. Bd. Pub. Serv.
Indiana	Laporte	June 11, 11 A.M.	Constructing macadamized road in Michigan twp.	Charles H. Miller, Co. Auditor.
Wisconsin	La Crosse	June 11, 2 P.M.	Macadam paving, Vine St., bet. 6th and 12th Sts.	H. J. Beckwith, Pres. B. P. W.
Wisconsin	Newburg	June 11, 2 P.M.	Constructing 3,840 sq. ft. cement sidewalks	Chas. O'Connor, Nick Schumann.
Wisconsin	Janesville	June 11, 2 P.M.	Laying 3,090 sq. yds. granite macadam, St. Lawr. Ave.	C. V. Kerch, City Engineer.
New York	Brooklyn	June 11, 3 P.M.	Asphalt paving on concrete, etc., Prospect and other parks	Henry Smith, Pres. Park Board.
Washington	Olympia	June 12, 2 P.M.	Clearing, grubbing and grading 2.81 miles State Road No. 9	Jos. M. Snow, State Hwy. Bd.
New York	Olean	June 12, 8 P.M.	Improving North Fourth St., macadam, curb, etc.	E. E. Allen, City Engineer.
Florida	Fort Barrancas	June 15, 11 A.M.	Constructing concrete walks	Capt. D. W. Hand, U. S. Army.
Dist. of Col'bia	Washington	June 15, noon	Asphalt block and bitu. pavements, macadam roads, concrete walks, Walter Reed, Army Gen. Hosp.	Capt. H. L. Pettus, Q. M., U. S. A.
Alabama	Montgomery	June 15, noon	Paving, any material, N. Court St. from Pollard to city line	A. R. Gilchrist, City Engineer.
Michigan	Charlottesville	June 15, 4 P.M.	Furn. mat. and paving on concrete with asphalt filler, and grading Lawrence Ave. and Lovett St.	Claude E. Fisher, City Clerk.
New Jersey	New Brunswick	June 15, 8 P.M.	Improving 28,000 sq. yds. street paving, 2,800 lin. ft. curb, etc.	John T. Kemp, St. Com'r.
Iowa	Fort Dodge	June 15	Comb. curb and gutter, 50 or more blocks, 1st Ave., 17th St.	C. H. Reynolds, City Engineer.
Ohio	Bowling Green	June 15	Grading, curbing, macadamizing road 5 miles long	F. W. Toan, County Auditor.
New Jersey	Freehold	June 16, 11 A.M.	Constructing stone road 17,497 ft. long	Geo. W. Paterson, Clk. Freeholders.
Pennsylvania	Harrisburg	June 17	Constructing roads, 47,583 ft. long in 3 counties	Jos. W. Hunter, St. Hwy. Com'r.
Tennessee	Johnson City	June 18, 4 P.M.	Paving 21,000 sq. yds., 6,100 lin. ft. concrete curb, etc.	L. N. Wilson, City Engineer.
Pennsylvania	Harrisburg	June 18	Improving 3 stretches: Jonestown road, 16 ft. wide; 3,450 ft.; 5,855 ft., and 8,350 ft. long, inc. 2 bridges	Jos. W. Hunter, St. Hwy. Com'r.
Ohio	Coshocton	June 18	Bldg. 6 highways; brick, macadam, etc.; \$1,000 check	E. M. Norman, Sec'y Dist. Rd. C'mrs.
Ohio	Mt. Gilead	June 18	Brick or block paving, grading, curb, etc., 2 sts.	W. F. Wieland, Village Clerk.
Pennsylvania	Bellefonte	June 19	Bldg. 7,560 ft. Osceola road, 7,507 ft. Tyrone Pike, Rush twp.; 6,044 ft. road, Harris twp., Center County	Jos. W. Hunter, Har'sb'g, S. H. C'mr.
Pennsylvania	Butler	June 20	Constructing 15,000 ft. road, Butler twp., Butler Co.	Jos. W. Hunter, Har'sb'g, S. H. C'm.
Ohio	Warren	June 22, noon	Asphalt block paving, etc., Elm St.; vit. brick, N. Tod Av.	E. M. Milligan, City Eng.
Florida	Fort Dade	June 22, 8 P.M.	Constructing brick roads	Constructing Quartermaster.
Alabama	Selma	June 22	Brick and asphalt paving, granite and comb. curb, etc., 2 sts.	Julien Smith, City Engineer.
South Dakota	Aberdeen	June 22	Brick or asphalt paving, certain streets	F. W. Raymond, City Auditor.
Ohio	Cadiz	June 24, noon	Brick paving, 10,427 sq. yds.	W. H. Lucas, Town Clerk.
Florida	Fort Barrancas	July 1, 11 A.M.	Constructing new and resurfacing old roads	Capt. D. W. Hand, U. S. Army.
Water Supply				
Illinois	Chicago	June 4, 10:30 A.M.	Work under 10 contracts laying water mains	C. A. V. Standish, Sec'y B. L. Imp.
Wisconsin	Milwaukee	June 4, 10:30 A.M.	Remodeling North Point pumping station	C. J. Poetsch, Chm. Bd. Pub. Wks.
Indiana	Michigan City	June 5, 11 A.M.	Bldg. subm. intake crib and laying 30-in. intake; \$45,000	Fred. C. Miller, Sec'y L. M. Water Co.
Dist. of Col'bia	Washington	June 6, noon	Furnishing cast-iron water pipe	Jay J. Morrow, Eng. Com.
Nevada	Carson City	June 6, noon	Bldg. concrete reservoir in Veary Canyon, inc. placing 50 cu. yds. concrete in 4 walls and 24 x 30 ft. floor; also furn. 5,000 ft. Converse or Mathewson lock joint pipe	State Bd. Capitol Commissioners.

Water Supply—Continued.

Missouri.....	Neosho.....	June 6, 2 P.M.....	Constructing reservoir and pipe system, U. S. Fish Sta.....	Com'r of Fisheries, Wash., D. C.
Iowa.....	Templeton.....	June 6.....	Constructing water system.....	M. J. Daeger, Town Clerk.
North Dakota.....	Velva.....	June 8, 8 P.M.....	Constructing water works system, inc. concrete reservoir, gravity and pressure pipe line, building, gasoline engine, pump, well, etc.....	J. E. Henkle, Mayor.
Ohio.....	Oxford.....	June 8.....	C. i. pipe, 1,572 ft., 6-in.; 48 ft., 4-in.....	Board of Public Affairs.
New York.....	Buffalo.....	June 9, 11 A.M.....	Furnishing water works supplies.....	F. G. Ward, Com'r Pub. Wks.
Pennsylvania.....	Mont Alto.....	June 9, 5 P.M.....	Labor and mat. for w. w. system for So. Mtn., Sem., inc. 300,000-gal. rein. concrete reservoir; 2 conc. collecting wells, 40,000 and 7,500 gals. cap.; pump house, 2 triplex pumps driven by 8-h.p. gaso. engines; 5,000 ft., 8-in. c. i.; 4,000 ft., 4-in.; 10,000 ft. 3 and 2-in. pipe lines, with all appurt., etc. Bldg. c. i. pipe line, reservoir and w. w. system, complete.....	Dr. S. G. Dixon, S. H. Com'r Harsbg.
Wyoming.....	Sheridan.....	June 9, 7:30 P.M.....	Furn. 3,745 net tons c. i. pipe, 12 tons specials.....	C. W. Sheldon, City Clerk.
New York.....	Brooklyn.....	June 10, 2 P.M.....	Constructing artesian well and pump.....	Knight & Hopkins, Eng.
Minnesota.....	Leech Lake Agcy.....	June 10, 2 P.M.....	Hauling and laying pipe, etc.; furn. and del. pipe, fittings, boiler tubes, etc.; also supplies for pumping stations, reservoirs and repair yards; also laying pipe, etc., Boro Richmond.....	Com'r Ind. Affrs, Wash., D. C.
Maryland.....	Baltimore.....	June 10.....	Bldg. 225,000,000-gal. high-service reservoir and diversion sewer, inc. 687,000 cu. yds. exc., 282,000 cu. yds. rolled embankment; 2,000 cu. yds. cement, etc.....	John H. O'Brien, Com. W. S., G. & E.
Louisiana.....	Fort St. Philip.....	June 15, 10 A.M.....	Constructing water and sewer systems at post.....	J. Barry Mahool, Mayor.
New York.....	Fort Hamilton.....	June 15, 11 A.M.....	Extension of water and sewer systems.....	Capt. Arthur Cranston, U. S. Army.
Oklahoma.....	Edmond.....	June 15, noon.....	Furn. material and machinery for complete water works system, inc. two 125 h. p. tubular boilers, two duplex steam pumps, straight-line air compressor, feed-water heater, two boiler feed pumps, 25 fire hydrants, 15 gate valves, 250 tons c. i. pipe.....	Constructing Quartermaster.
Cuba.....	Cienfuegos.....	June 15.....	Furnishing c. i. water pipe.....	O'Neill Eng. Co., Dallas, Tex.
Ohio.....	Cincinnati.....	June 16, noon.....	Laying c. i. pipe, etc., on Queen City Ave., etc.; 8,800 ft. 16-in.....	The Mayor.
North Dakota.....	Wahpeton.....	June 16, 2 P.M.....	Making improvements to water system at Indian Sch.....	A. Herrmann, Pres. W. W. Trus.
Massachusetts.....	Springfield.....	June 18, 2 P.M.....	Constructing covered masonry reservoir with gate houses, etc., cont. No. 3 L. R. W. S., in Agawan, 5 miles away, reservoir to cover 92,000 sq. ft., 26 ft. deep.....	J. C. Clifford, Supt. Indian Sch.
Michigan.....	Grand Rapids.....	June 25.....	Furn. 12,000,000-gal. pump; cost, \$80,000.....	C. H. Bennett, Chm. Bd. Wat. Com.
Ohio.....	Lewisburg.....	July 1.....	Bldg. water and light system; operated by gasoline.....	S. A. Freshney, Bd. Pub. Wks.
Ontario.....	Ottawa.....	July 8, 4:30 P.M.....	Constructing a movable dam.....	Harry J. McDargh, Dayton, C. E.
California.....	Los Angeles.....	July 17.....	Bldg. Jawbone div. Los Angeles aqueduct, cap. 400 second ft., inc. 43,000 lin. ft. lined tunnel; 60,000 ft. lined conduit; 340,000 cu. yds. excavation, etc.....	Fred. Gelinas, Sec'y Dept. Pub. Wks.

Sewerage

New York.....	Brooklyn.....	June 3, 11 A.M.....	Constructing relief sewer, etc., various sts. & aves.; 3 to cost over \$350,000 each, one \$35,000.....	Bird S. Coler, Boro. President.
Pennsylvania.....	Philadelphia.....	June 3.....	Schedule B, Main sewers; Schedule A, bridges.....	Geo. R. Stearns, Dir. Dept. P. W.
Illinois.....	Cairo.....	June 4, 10 A.M.....	Constructing pipe sewers and filling with earth, in 22d, 23d, 24th, 25th, 26th, 27th, and Charles Sts., \$67,000.....	W. B. Thistlewood, City Eng'r.
Ohio.....	Coshocton.....	June 4, noon.....	Bldg. 8-in. sewer, Third St.; also one in Eighth St.....	R. M. Temple, Clk. Bd. Pub. Serv.
Kansas.....	Atchison.....	June 4, 2 P.M.....	Bldg. septic tank, filter, contact beds for disp. plant, S. O. H.....	State Bd. Control, Topeka.
Pennsylvania.....	Emsworth.....	June 4, 5 P.M.....	Bldg. 1,015 ft. 8-in. sewer, North Ave.; 450 ft. 8-in. Superior St.; 1,150 ft. 8-in., Wallaston Ave.; manholes, etc.....	McBride Sur. & Eng. Co., Ltd.
Indiana.....	Peru.....	June 5, 7:30 P.M.....	Constructing 8-ft. concrete sewer; cost, \$18,245.50.....	Fitzsimons Bldg., Pittsburg.
Indiana.....	Sullivan.....	June 6, 1 P.M.....	Bldg. 5 concrete sewers through levee with flood gates, to be 4 to 8 ft. inside diam.; 60 to 70 ft. long.....	Geo. F. Merley, Town Clerk.
South Dakota.....	Aberdeen.....	June 8, 8 P.M.....	Constructing sewers ordered by Council.....	R. L. Bailey, County Surveyor.
Indiana.....	Cambridge City.....	June 9, 7:30 P.M.....	Constructing storm sewer in Main St.; also grading, etc.....	F. W. Raymond, City Auditor.
Minnesota.....	Virginia.....	June 9.....	Constructing sewers in certain streets.....	Albert E. Bickford, City Clerk.
California.....	Oakland.....	June 10, 10 A.M.....	Bldg. intercepting sewer, 2d St., outlet Oak St.....	W. B. Fawcett, Sec'y Bd. Pub. Wks.
Maryland.....	Baltimore.....	June 10, 11 A.M.....	Bldg. high-service reservoir and diversion sewer.....	J. B. Mahool, Pres. Bd. Awards.
New York.....	Brooklyn.....	June 10, 11 A.M.....	Constructing sewer in E. 8th St.; cost, \$3,537.....	Bird S. Coler, Boro. President.
Michigan.....	Iron Mountain.....	June 12, 1 P.M.....	Bldg. 2,806 ft. 48-in. rein. concrete sewer.....	John B. Calvi, City Clerk.
Louisiana.....	Pt. St. Philip.....	June 15, 10 A.M.....	Constructing sewer and water system.....	Capt. Arthur Cranston, U. S. Army.
New York.....	Fort Hamilton.....	June 15, 11 A.M.....	Extension of sewer and water system.....	Constructing Quartermaster.
Ohio.....	Wauseon.....	June 15, noon.....	Constructing sewer in District No. 2.....	L. H. Deyo, Clerk, B. P. S.
Ohio.....	Napoleon.....	June 15.....	Constructing storm water and sanitary sewer.....	G. E. Rafferty, Village Clerk.
New Jersey.....	Riverton.....	June 18, 8 P.M.....	Mat. and labor for single-ring 36-in. brick culvert, rein. with 14-in. cement coating, 1,740 ft. long, etc.....	H. S. Haines, Temple Bldg., Camden, C. E.
Wisconsin.....	Oshkosh.....	June 20, noon.....	Bldg. sewers, Mt. Vernon St., Harris and Central Aves.....	W. A. Marden, Bd. Pub. Wks.
Louisiana.....	New Orleans.....	June 30, 3 P.M.....	Furn. and erecting two 100 k.w., 250 volt., dir. con. generators; two 75 h.p., 250 volt. motors; one 2,500,000-gal. turbine pump and 1,000,000-gal. triplex pump, to work against 125-ft. head, dir. con. to electric motor; 2,000,000 cen. pump; two 4,000,000 cen. pump units; two 5 h.p. 250 volt. motors; one surface condenser, 6,500 lbs. steam per hr.; air pump; piping, valves, wiring, switchboard, etc.....	George G. Earl, Gen. Supt. S. & W. Board.
Virginia.....	Portsmouth.....	June 30.....	Bldg. sewers, 5th Ward; add to pump. sta., cost, \$110,000.....	Bascom Sykes, City Engineer.
New Jersey.....	Elizabeth.....	July 1.....	Bldg. intercepting sewer, inc. 12,000 ft. 28 to 44-in. brick sewer, 8 to 25 ft. deep; 4,000 ft. 10-15-in. pipe, 11 to 25 ft. deep; 15,000 cu. yds. rock exc.; 70 manholes, pumping plant, cap. 5,000 gals. per minute.....	W. H. Luster, Jr., City Surv.
New Jersey.....	Avalon.....	July 2.....	Constructing portion of sewer system; cost, \$8,000.....	R. L. Goff, Ocean City, Eng'r.

Public Buildings

New York.....	Schenectady.....	June 3.....	Bldg. 16-room school; new bids; \$80,000 appropriation.....	Horace S. Van Voast, Mayor.
Wisconsin.....	Milwaukee.....	June 4, 10:30 A.M.....	Comp. plans branch public library; cost, complete, \$30,000.....	C. J. Poetsch, Chm. Bd. Pub. Wks.
Illinois.....	Chicago.....	June 4, 11 A.M.....	Additions and alterations to Fire Dept. Shop and other bldgs.....	John J. Hanberg, Com'r Pub. Wks.
North Carolina.....	Greenville.....	June 4, 11 A.M.....	Four bldgs.; E. Caro. Teachers' Train. School; cost, \$100,000.....	Hook & Rogers, Charlotte, Arch.
Minnesota.....	Crookston.....	June 4, 3 P.M.....	Bldg. Franklin School; brick, 80 x 84 ft., 3 stories.....	Bd. Educ. Ind. Sch. Dist. No. 1.
Ohio.....	Alexandria.....	June 5, noon.....	Bldg. 2-story and base addition to school, St. Albans twp.....	Walter Castle, Clk. Tp. Bd. Educ.
Ohio.....	Cincinnati.....	June 5, noon.....	Alterations, etc., 4th floor of Court House.....	Fred Drehs, Clk. Co. Com'r's.
Ohio.....	Cleveland.....	June 6, noon.....	Bldg. public library; Edw. L. Tilton, N. Y. City, Arch.....	Carl Lorenz, Sec'y Pub. Library Bd.
Maryland.....	Annapolis.....	June 6, noon.....	Granite, iron and cornice work, etc., power house, Naval Acad.....	Ernest Flagg, N. Y. City, Arch.
Virginia.....	Norfolk.....	June 6, 3 P.M.....	Bldg. 4-room brick school at Deep Creek in County.....	W. T. Zepp, Architect.
New York.....	New York.....	June 8, 11 A.M.....	Gen. constructing, repairs, etc., 7 school bldgs.....	C. B. J. Snyder, Supt. Sch. Bldgs.
Ohio.....	Springfield.....	June 8, noon.....	Additions and repairs to School No. 6.....	Drach & Miller, Kelly Bldg., Archts.
Iowa.....	Clinton.....	June 8, noon.....	Bldg. 2-story and base, Franklin school.....	John Morrell & Son, Archts.
Ohio.....	Cincinnati.....	June 8, noon.....	Heating and ventilating system in Hughes high school.....	Dr. J. M. Withrow, Bd. Educ.
Texas.....	Prairie View.....	June 8, noon.....	Bldg. 3-story school; also plumbing and wiring.....	Smith & Schenk, Ft. Worth, Archts.
Alberta.....	Calgary.....	June 8, noon.....	Bldg. Gen. hospital; F. J. Lawson, Arch., Norman blk.....	Col. Walker, Chm. Hospital Bd.
New Hampshire.....	Dover.....	June 8, 3 P.M.....	Constructing, complete, U. S. Post Office.....	James Knox Taylor, Wash., D. C.
New York.....	Cobleskill.....	June 8.....	Bldg. 2-story brick and t. c. almshouse; cost, \$28,000.....	Oren Finch, Schenectady, Arch.
Massachusetts.....	Boston.....	June 8.....	Labor and material for new school, Dorchester.....	E. T. P. Graham, School St., Archt.
Wisconsin.....	Oshkosh.....	June 9, 2 P.M.....	Heating, plumbing, etc., Dale school.....	W. A. Marden, Chm. Bd. Pub. Wks.
North Dakota.....	Taylor.....	June 9, 4 P.M.....	Bldg. 2 schools, Ridgeway School, Dist. No. 15.....	Sam Veagen, Pres. School Bd.
West Virginia.....	Wheeling.....	June 9.....	Bldg. new high school on S. Chaplin St.....	Board of Education.
New Jersey.....	Hopewell.....	June 9.....	Bldg. addition to Co. workhouse for 48 prisoners.....	Jos. C. Harrison, Sec'y Bd. Freeh'rs.
California.....	Yreka.....	June 10, 10 A.M.....	Constructing a Hall of Records for Siskiyou County.....	Board of County Supervisors.
Wisconsin.....	Madison.....	June 10, 10 A.M.....	Bldg., complete, Animal Husbandry Bldg., Univ. Wis.....	M. E. McCaffrey, Act. Sec'y, U. W.
New York.....	Fort Slocom.....	June 10, 11 A.M.....	Const. admin. bldg., drill hall, gmn., heating, etc.....	Constructing Quartermaster.
Pennsylvania.....	New Castle.....	June 10, noon.....	Bldg. 3-story 175 x 200 ft., brick, etc., high school; \$300,000.....	W. G. Eckles, Architect.
Tennessee.....	Dyersburg.....	June 10, noon.....	Bldg. addition to school; also heating, etc.....	M. W. Ewell, Mayor.

Public Buildings—Continued.

North Dakota..	Halliday.....	June 10, noon.....	Bldg. 2 schools, Juel School Dist. No. 19.....	H. W. Comstock, Clk. School Bd.
New Jersey..	Jersey City.....	June 10, 3 P.M.....	Interior work for new Court House, etc.....	A. J. Clements, Sec'y Bldg. Com.
West Virginia..	Wheeling.....	June 10, 4 P.M.....	Building high school; also plans for building.....	Walter H. Hall, Clk. Bd. Educ.
New York.....	Au Sable Forks.....	June 10.....	Bldg. 2-story and basement school; 72 x 78 ft.....	F. L. Kemp, Clk., Bd. Educ.
Indiana.....	Boswell.....	June 10.....	Steam and hot water heating plant for school.....	School Board.
Massachusetts..	New Bedford.....	June 10.....	Constructing new municipal building.....	Samuel C. Hunt, Architect.
Nebraska.....	Holstein.....	June 10.....	Bldg. 2-story brick school, 34 x 62 ft., Dist. No. 11.....	M. N. Blair, Hastings, Archt.
Texas.....	Ft. Sam Houston.....	June 11, 11 A.M.....	Bldg. 8 cavalry stables, 2 other stables, bakery.....	L. J. Fleming, Constr. Q. M.
New York.....	Wampsville.....	June 11, 1 P.M.....	Bldg. County Court House and jail.....	J. A. Loyster, Chm. Bd. Co. Superv.
Pennsylvania..	Easton.....	June 11.....	Constructing 2 fire stations on South side.....	John Mutchler, City Clerk.
California.....	Los Angeles.....	June 12 9 A.M.....	Erecting dormitory bldg., Cal. Polytechnic School.....	California Polytechnic School.
Colorado.....	Cheyenne Wells.....	June 12 noon.....	Erecting Court House for Cheyenne County.....	John J. Huddart, Denver, Archt.
Ohio.....	Solon.....	June 12, noon.....	Erecting school, Dist. No. 2; F. H. Smith, Ashta., Archt.....	J. H. Brown, Clk. Bd. Educ'n.
Missouri.....	St. Charles.....	June 12 3 P.M.....	Constructing, complete, U. S. Post Office.....	James Knox Taylor, Wash., D. C.
Alberta.....	Edmonton.....	June 13, noon.....	Erecting Court House.....	John Stocks, Dep. Min. Pub. Wks.
Ohio.....	Elmwood Place.....	June 13, noon.....	Heat and ventilating system in public school.....	E. N. Hannaford, Cincin., Mech. Eng.
Ohio.....	Wyoming.....	June 15, noon.....	Erecting Fire Dept. building; bond \$1,000.....	W. A. Clark, Village Clerk.
Ohio.....	Kingscreek.....	June 15, noon.....	Heat & vent. old school; also new addition.....	C. R. Stonebraker, Clk. Bd. Educ'n.
South Carolina..	Fairfax.....	June 15.....	Bldg. 2-story school, 42 x 74 ft., brick, etc., \$7,000.....	G. L. Preacher, Box 603, Augusta, Ga.
Massachusetts..	Springfield.....	June 15.....	Bldg. 2-story and base, library; 220 x 86 ft.; \$300,000.....	Edw. L. Tilton, N. Y. City, Archt.
Virginia.....	Bristol.....	June 15.....	Erecting \$50,000 Court House.....	J. H. Gose, City Clerk.
California.....	Lemon Grove.....	June 15.....	Building 2-story school; 48 x 72 ft., etc.....	Kennedy & Craine, San Diego, Archt.
Kansas.....	Newton.....	June 17 3 P.M.....	Constructing, complete, U. S. Post Office.....	James Knox Taylor, Wash., D. C.
Iowa.....	Waterloo.....	June 17.....	Erecting new school, East Waterloo.....	H. B. White, 224 E. 4th St.
Texas.....	Houston.....	June 18, 3 P.M.....	Constructing Federal Building.....	James Knox Taylor, Wash., D. C.
Utah.....	Provo.....	June 22, 3 P.M.....	Constructing, complete, U. S. Post Office.....	James Knox Taylor, Wash., D. C.
Arkansas.....	Fayetteville.....	June 24, 3 P.M.....	Constructing, complete, U. S. Post Office.....	James Knox Taylor, Wash., D. C.
Texas.....	Greenville.....	June 25, 3 P.M.....	Constructing, complete, U. S. Post Office.....	James Knox Taylor, Wash., D. C.
Oregon.....	Portland.....	June 25.....	Plans for \$250,000 high school.....	Board of Education.
South Carolina..	Sumter.....	June 29, 3 P.M.....	Constructing, complete, U. S. Post Office.....	James Knox Taylor, Wash., D. C.
Pennsylvania..	Meadville.....	June 30, 3 P.M.....	Constructing, complete, U. S. Post Office.....	James Knox Taylor, Wash., D. C.
Oregon.....	Portland.....	June 30.....	Plans, \$250,000 high school; prices, \$1,000, \$500, \$300, \$200.....	Board of Education.
Maryland.....	Baltimore.....	July 1, 3 P.M.....	Bldg. and mech. equipment, extension to Federal Bldg.....	James Knox Taylor, Wash., D. C.
Tennessee.....	Columbia.....	July 2, 3 P.M.....	Constructing, complete, U. S. Post Office.....	James Knox Taylor, Wash., D. C.
Georgia.....	Marietta.....	July 6, 3 P.M.....	Constructing, complete, U. S. Post Office.....	James Knox Taylor, Wash., D. C.
Illinois.....	Chicago.....	July 14, 11 A.M.....	Wrecking, exc. and caisson: s for new City Hall.....	Holabird & Roche, Monadn. Bk., Architects.
Wisconsin.....	Rhineland.....	July 20.....	Constructing 3-story Court House; cost, \$100,000; stone, fire-proof construction, 120x95 ft. A. Taylor, Chm. Co. Com'rs.....	C. H. Tegen, Manitowoc, Arch.
Minnesota.....	St. Paul.....	August 1.....	Competitive plans for Mechanical Arts High School, 62 rooms; Architects all over country invited to submit plans.....	Com. on Schools, School Bd.

Bridges

Pennsylvania..	Philadelphia.....	June 3.....	Constructing bridges, Schedule A., etc., app., \$297,000.....	Geo. R. Stearns, Dir. Dept. Pub. Wks.
Indiana.....	Goshen.....	June 4, 10:30 A.M.....	Bldg. 17 new bridges in 12 twps.; repairing 7 others.....	D. O. Batchelor, County Auditor.
Ohio.....	Gallipolis.....	June 4, noon.....	Bridge work in various townships.....	F. F. Thornley, County Auditor.
Ohio.....	Wakeman.....	June 4, noon.....	Bldg. rein. concrete bridge floor over race at Webb St.....	Wilbur J. Watson, Clev'd. Cons. Eng.
Ohio.....	Norwalk.....	June 4, noon.....	Bldg. 220 ft. bridge over Vermillion River for County.....	W. J. Watson, Cleveland, Eng'r.
Oregon.....	Eugene.....	June 4, 2 P.M.....	Bldg. 50-ft. span, Howe truss bridge, Edwds Slough.....	E. V. Lee, County Clerk.
New Jersey.....	Jersey City.....	June 4, 4 P.M.....	Bldg. hwy. bridge over Morris Canal at Ave. C.....	Board of Chosen Freeholders.
Ohio.....	Tiffin.....	June 5, 1 P.M.....	Repair and reflooring Monroe St. bridge.....	C. J. Peters, Engineer.
Massachusetts..	Russell.....	June 5, 2 P.M.....	Constructing bridge over Westfield River.....	E. D. Parks, Sec'y Bridge Com'n
Pennsylvania..	Harrisburg.....	June 5.....	Bldg. rein. concrete viaduct in Wash'ton Co.....	Jos. W. Hunter, St. Ry. Com'r.
Colorado.....	Golden.....	June 6, 5 P.M.....	Bldg. steel bridge over Bear creek, span 40 ft., rdwy., 16 ft.; abut., 8 ft. above bed of creek; one wing 20 in., one 12 in. drop.....	H. J. Juchem, County Clerk.
Ohio.....	Elyria.....	June 8, 1 P.M.....	Bldg. stone or concrete masonry sub. for Garfield bridge.....	Charles Chandler, Clk. Co. Com'rs.
Pennsylvania..	Wilkes-Barre.....	June 8.....	Bldg. 33 bridges in Luzerne Co.; cost, \$300 to \$5,000; total, \$215,000, inc. concrete, stone arch, and steel.....	Jas. M. Norris, County Contrlr.
Pennsylvania..	Bloomsburg.....	June 9, 10 A.M.....	Constructing 3 steel beam bridges.....	Bruce Black, Clk. Co. Com'rs.
Pennsylvania..	Franklin.....	June 9, noon.....	Constructing bridge in Scrubgrass township.....	County Commissioners.
Ontario.....	Ottawa.....	June 9, noon.....	Bldg. steel superstructures and floor system, complete, for bridge in Dist. A., over 11 rivers.....	P. E. Ryan, Sec'y Com'rs Tanse. Ry.
Pennsylvania..	Williamsport.....	June 9, noon.....	Bldg. 3 concrete steel bridges, 2 stone arch bridges.....	Frank L. Miller, Clk. Co. Com'rs.
Pennsylvania..	Franklin.....	June 9, 1 P.M.....	Bldg. 30-ft. span, 16 ft. rdwy., and approaches, inc. removing old bridge, L. 2-Mile Run, Cranberry tp.....	Venango County Commissioners.
Ohio.....	Cleveland.....	June 10, 11 A.M.....	Constructing 4 county bridges, 2 culverts.....	Wm. F. Black, Clk. Bd. Co. Com'rs.
New York.....	Buffalo.....	June 10, noon.....	Constructing rein. concrete viaduct for hwy. and st. ry. travel, 1,400 ft. long, 40 ft. rdwy.; two 5-ft. walks.....	West N. Y. Constr. Co., Co. Brisbane Building.
Illinois.....	Chicago.....	June 10, noon.....	All metal work for super. of 12 steel hwy. bridges over north shore channel; 5 under one cont.; others separate.....	I. J. Bryan, Clk., Sanitary Dist.
Washington.....	Spokane.....	June 10, 2 P.M.....	Perm. imp. 783 ft. long, Sprague Ave., 4 plans steel girder or rein. concrete viaduct, rein. concrete retaining wall, earth or rock fill; dry retaining walls, rock fill.....	J. T. O'Brien, Sec'y Bd. Pub. Wks.
Idaho.....	Kamiah.....	June 10.....	Bldg. \$12,000 bridge over Clearwater River, Kamiah Br. Co.....	Chas. Thompson, Omaha, Neb., C. E.
Ohio.....	Hamilton.....	June 11, 10 A.M.....	Repairing west abutment, bridge, Milford township.....	J. E. Brate, County Auditor.
New York.....	New York.....	June 11, 2 P.M.....	Furn., etc., bronze grills, castings, tubing, etc., Wmsbg. bridge.....	J. W. Stevenson, Com'r Bridges.
Pennsylvania..	Doylestown.....	June 15, 11 A.M.....	Bldg. rein. concrete bridge near Cross Keys.....	W. Cadwallader, Clk., County Bd.
Nebraska.....	Omaha.....	June 15, noon.....	Constructing wooden pile bridges required for year.....	D. M. Haverly, County Clerk.
Ohio.....	Jefferson.....	June 15, 1 P.M.....	Bldg. retaining wall, bridge over creek, Sheffield township.....	J. S. Matson, County Surv.
Ohio.....	St. Clairsville.....	June 15, 1 P.M.....	Bldg. stone or concrete substructures, 7 bridges, superstructures 2 of them; concrete floors on all.....	A. W. Beatty, County Auditor.
Kansas.....	Salina.....	June 16.....	Bldg. 2 bridges, 70 and 90 ft. long.....	County Auditor.
Ohio.....	Zanesville.....	June 17.....	Bldg. rein. concrete bridge over Crk. at Roseville.....	Muskingum County Auditor.
Indiana.....	Portland.....	June 18.....	Bldg. 6 steel bridges, 18 to 140 ft. long, using concrete abutments also 2 concrete arches.....	W. H. Badders, County Surveyor.
Tennessee.....	Clinton.....	June 20, noon.....	Bldg. concrete arch culvert on Depot St.....	J. K. P. Wallace, Chm. Co. Pike Com.
California.....	Yreka.....	July 7, noon.....	Bldg. 220 ft. span steel bridge over Klamath River near Scott Bar; also 100 ft. steel span at Sawyers Bar.....	W. J. Neilon, County Clerk.

Lighting and Electricity

Prince Edw. Id.	Charlottetown.....	June 4.....	Erecting power house and chimney, Pr. Edw. Id. Ry.....	D. Pottinger, Gen. Mgr., Moncton, N. B.
Pennsylvania..	Wilkes-Barre.....	June 5, 2 P.M.....	Electric light, fixtures, etc., new Court House, \$35,000.....	McCormick & French, Archs.
Texas.....	Galveston.....	June 8, noon.....	Installing, etc., series arc lamps on Galv. Co. Blvd.....	John M. Murch, Co. Auditor.
Dist. of Col'bia.	Washington.....	June 8.....	Furnishing electric motors for lsth. Canal Com'n.....	Col. H. F. Hodges, Purch. Agt.
Texas.....	Prairie View.....	June 8.....	Electric wiring and plumbing, new bldg., A. & M. College.....	A. & M. College, College Station.
Wisconsin.....	Oshkosh.....	June 9.....	Electric wiring, etc., Dale school.....	A. G. Pittelkow, Omaha, Neb., Engr.
Utah.....	Ogden.....	June 10, 3 P.M.....	Conduit and electric wiring system, ext. to Federal Building.....	James Knox Taylor, Wash., D. C.
New Jersey.....	Jersey City.....	June 10, 3 P.M.....	Bldg. and equipping power house, etc., new Court House.....	Hugh Roberts, 1 Exch. Pl., Arch.
New York.....	Fort Slocum.....	June 10.....	Electric wiring, etc., adm. bldg., drill hall and gym.....	Constructing Quartermaster.
New York.....	New York.....	June 11, 2 P.M.....	Electrical equipment of University Heights bridge.....	J. W. Stevenson, Com'r Bridges.
Pennsylvania..	Pittsburg.....	June 11.....	Constructing \$100,000 power house for Dept. Char. and Cor.....	John P. Brennan, Bur. Bldg. Insp.
Missouri.....	Jeff. Barracks.....	June 15, 11 A.M.....	Bldg. complete, electric light system, inc. wiring all bldgs, pole lines, generating sta. bldg.; furn. fixtures, etc.; also boilers, engines, generators and pumps; also alt. bid to furn. current for lighting.....	Capt. O. W. Bell, Q. M., U. S. Army.
Dist. of Col'bia.	Washington.....	June 16, 10 A.M.....	Furn. quantity electrical hoist equipments, motors, etc., at Newport News, Va., and Quincy, Mass.....	E. B. Rogers, P. M. Gen., U. S. Navy.

Lighting and Electricity—Continued

Pennsylvania...	Wilkes-Barre...	June 16, noon.....	Lighting sts., lanes and public places with incan. gas o. naphtha lights, 3 or 5 years from July 15.....	Fred. H. Gates, City Clerk.
Mississippi.....	Carrollton.....	June 16.....	Rebuilding municipal electric light plant.....	The Mayor.
Mississippi.....	Natchez.....	June 17, 4 P.M.....	Contract for public lighting; 5 years from May 1, 1909.....	O. W. Fowler, City Engineer.
Oregon.....	Chemaua.....	June 19, 2 P.M.....	Install. boiler, extend. power house; bldg. chimney.....	E. L. Chalcraft, Supt. Ind. Sch.
Idaho.....	Minidoka.....	June 19.....	Furn. elec. apparatus for irrigation project; estimate, \$55,000 for immediate purchase, \$100,000 optional.....	O. H. Ensign, Ch. Elec. Eng., 25 Carroll Bldg., Madison, Wis.
Washington.....	Spokane.....	June 23, 3 P.M.....	Install. conduit and wiring system, Federal Bldg.....	James Knox Taylor, Wash., D. C.
Louisiana.....	New Orleans.....	June 30, 3 P.M.....	Electrical and pumping machinery, Algiers station.....	F. S. Shields, Sec'y S. & W. Bd.
Ohio.....	Lewisburg.....	July 1.....	Bldg. electric light and water system; oper. by gasoline.....	Harry J. McDargh, Dayton, C. E.
North Dakota.....	Valley City.....	July 6, 8 P.M.....	Sale of city's electric light plant, \$40,000 or over; exclusive 20-year franchise to successful bidder.....	H. P. Halverson, City Auditor.
Dist. of Col'bia.	Washington.....	July 15.....	Furn. 20 miles, type 44, interm. single-conductor cable, spec. 419; 30 miles, type 45, deep sea cable, sing.-cond., spec. 420; 5 miles, type 46, light double armor, single conductor cable, spec. 421.....	Chief Signal Officer, U. S. Army.

Miscellaneous

New York.....	New York.....	June 4, 3 P.M.....	Furn. full-size model, mold, piece molds, labor and materials and casting bronze drinking fountains for Park Dept.....	Dept. of Parks, Boro. Bronx.
New Jersey.....	Trenton.....	June 5.....	Erecting hothouse in Cadwallader Park.....	Edw. B. Fletcher, Clk. Pk. Com'rs.
Louisiana.....	New Orleans.....	June 6, 11 A.M.....	Furnishing 10,000 tons of rock for New Orleans harbor.....	Capt. J. F. McIndoe, U. S. Eng'rs.
Washington.....	Brewerton.....	June 6, 11 A.M.....	Furn. and install. 5,000 cu. ft. air compressor, etc.; \$27,500.....	Commandant, Navy Yard.
Ontario.....	Ottawa.....	June 8, noon.....	Furn. 45,000 iron posts; also 1,300 iron posts for use on survey of Dominion lands, in specified lots.....	P. G. Keyes Sec'y Dept. Interior.
Dist. of Col'bia.	Washington.....	June 8.....	Furnishing hose, nozzles and rubber gloves.....	Col. H. F. Hodges, Canal Com'n.
Illinois.....	Peoria.....	June 8.....	Furnishing 6,000 ft. of fire hose.....	P. Hulsebus, City Clerk.
Minnesota.....	Bemidji.....	June 8.....	Furnishing chem. fire engine and 500 ft. fire hose.....	Thomas Maloy, City Clerk.
Utah.....	Ogden.....	June 9, 3 P.M.....	Low-pres. steam heat. appar., exten. to Federal Bldg.....	James Knox Taylor, Wash., D. C.
Texas.....	Dallas.....	June 10, 3 P.M.....	Furn. f. o. b. Dallas, bars for rein. new conduit, inc. 2,132 pieces 7 ft. 8 in. long; 800 of 8 ft.; 1,600 of 2 ft.; and 35,000 lin. ft., bars 24 to 30 ft. long; steel, net sect. area, 19 sq. in. or 2 in. sq. weight, 66 lbs. lin. ft.; mild steel, tensile strength, 50,000 lbs. per sq. in. or more, known as "Mechanical Bond Bar".....	J. B. Winslett, City Secretary.
North Carolina.	Wilmington.....	June 12, noon.....	Furn. fire engine, 700 to 900 gal. per min.; also reldg. engine.....	W. A. French, Jr., Chm. Fire Com.
Manitoba.....	Harding.....	June 12, noon.....	Bldg. telephones as required in Woodworth mun.....	W. V. Stevenson, Sec'y Treas.
Alabama.....	Fort Morgan.....	June 15.....	Bldg. wharf, Fort Gaines; also ext. one, etc., Fort Morgan.....	Capt. L. F. Garrard, Jr., U. S. Army.
Manitoba.....	Winnipeg.....	July 8.....	Constructing movable dam, steel service and highway bridge, repair shop, etc., at St. Andrews Rapids, Red River.....	Fred. Gelinas, Ottawa, Ont., D. P. W.

STREET IMPROVEMENTS

Etowah, Ala.—A committee is to be appointed to secure competent engineers to have charge of improvements to highways in this section.

Tusculum, Ala.—It is planned to expend \$12,000 for good roads.

Ft. Apache, Ariz.—The Quartermaster General has approved the necessary expenditure for making repairs to roadway from Ft. Apache to Holbrook.

Fort Smith, Ariz.—Bonds, \$650,000, of paving district No. 5 are to be sold by the city.

Glendale, Cal.—Main highway from Eagle Rock to this place is to be about 100 feet wide and will be modern in every detail.

Hollywood, Cal.—Citizens recently voted \$25,000 bonds for good roads.

Pasadena, Cal.—Council has ordered the resurfacing of Colorado street from Fair Oaks to Broadway, with asphalt.

Bridgeport, Conn.—The city has decided to lay its own paving this year instead of by private contract; the Council Committee on Streets and Sidewalks will shortly advertise for bids for the furnishing of the necessary material.—Address Mayor Henry Lee.

New Britain, Conn.—The Board of Public Works has asked Council for orders to resurface streets as follows: Franklin square, east side, estimated cost \$759; Myrtle street between Grove and Booth streets, \$1,269; East Main street between Center and Elm streets, \$1,470, and also ordering the Connecticut company to resurface between its tracks on or before July 1 and also to bring its tracks up to the proper grade; Elm street between Park street and the railroad tracks and the Connecticut company, received the same orders as given in the previous instance estimated cost \$1,272; Orchard street, \$540; Center street, \$645; Washington street between railroad crossing and Broad street, \$1,536; Spring street, between Winter and North street, \$645; Hartford avenue, between East Main and North streets, \$1,275.

The Board was ordered to take the necessary steps to discontinue Mill street from South Main street to the west line of the Volz property; to take Corbin place for a public highway. Grade, street and building grades for North Burritt street were ordered.

Thompsonville, Conn.—Church street is being surveyed preparatory to laying the macadam.

Dover, Del.—Morgan County has voted \$260,000 bonds for building better roads throughout the county.

Washington, D. C.—The Senate has passed a bill proposing to construct a road on the south bank of the Anacostia River.

Wilmington, Del.—Street and Sewer Committee is considering the paving of a number of streets in South Wilmington.

Alton, Ill.—Council has passed an ordinance for paving Ridge street from the north curb of Sixth street to the south curb line of Union street.

Bloomington, Ill.—At a recent meeting of the Board of Local Improvements a proposi-

tion was presented for the paving of West Front street from Allin street to the C. & A. tracks.

Elgin, Ill.—The Board of Local Improvements has drawn up a resolution for the paving of Dundee avenue.

Homer, Ill.—The matter of paving some of the streets in this town is being agitated.

Joliet, Ill.—South Chicago street residents want the plans calling for an asphalt pavement on that thoroughfare as far as Duncan street, to provide for pavement as far as city limits.

Lincoln, Ill.—Plans are under way for building a macadam road from the business section of the city to the Union and Holy Cross cemeteries south of the city.

Rockford, Ill.—Business men of State and Main streets recently held a meeting in the office of A. R. Haley, State and Wyman streets, to discuss the matter of repaving Main and State streets.

Rockford, Ill.—Council is considering the matter of paving certain streets with brick or asphalt.

Waukegan, Ill.—An ordinance was passed authorizing the construction of cement sidewalks on portion of Waver street, Phillips avenue and Marion street.—H. Thacker, City Clerk.

Evansville, Ind.—Council has received a petition from property owners asking that an alley in block 7, Blackford's Grove, be paved with brick.

Goshen, Ind.—Council has adopted plans and specifications for paving Fifth street from the Lake Shore tracks to Main street with asphalt macadam.

Greenfield, Ind.—A petition has been presented to Council asking for the paving of North street from Broadway to Howard street.

Jasonville, Ind.—Bonds are to be issued for road improvements.

Colfax, Ia.—The matter of paving the business section of the town is being considered.

Oskaloosa, Ia.—Council has ordered several blocks of paving.

Red Oak, Ia.—The Town authorities are considering the matter of paving and curbing; final action will be taken June 20.

Belleville, Kan.—A good roads club has been organized and fund has been started to be used in improving roads.—W. T. Dillon, President.

Ft. Leavenworth, Kan.—Authority has been given for certain grading and paving at this post.

Larned, Kan.—The citizens of the town are in favor of good roads.

Louisville, Ky.—The Board of Public Works has decided to build a number of new sidewalks this summer; the sidewalks will probably be of granitoid material.

New Orleans, La.—Council is considering a resolution introduced by Mr. Frawley for the paving of University Place from Canal street to Tulane avenue with granitoid.

Annapolis, Md.—The vast undertaking of providing the people of Maryland with good highways received its start when Governor

Crothers and the members of the Good Roads Commission elected Mr. W. W. Crosby Chief Engineer of the Commission and adopted a plan for new roads for St. Mary's and Calvert Counties.

Baltimore, Md.—At a recent meeting of the automobile men held at the Shawnee Canoe Club, Cumberland, the construction of new road from this city to Grantsville was discussed; will ask State to build.

Council is considering the matter of paving Light street, between Pratt and Lee streets; the work will be done under the direction of City Engineer by day labor.

Hagerstown, Md.—Council has passed an ordinance for paving portion of South Potomac street, lying between the north side of Baltimore street and the south side of E. Householder's property below Locust Point; vitrified brick or block will be used.—Luther Peterman, Clerk.

Haverhill, Mass.—The blanket order for \$20,000 worth of permanent street work has been presented to Mayor Wood; as the order embodies the recommendation of the Committee on Streets, the Mayor intends to approve it, but says he cannot do so until he ascertains the position of the Aldermen on the bond order for the same amount to pay for the work.

Fall River, Mass.—The Board of Aldermen, on recommendation of the Committee on Highways, has adopted an order for the laying of a granite paving in Pleasant street, from the present terminus east.

Milford, Mass.—The entire length of Main street is to be macadamized, the work beginning July 1, under Superintendent Nelligan and the Highway Department employees.

Montague City, Mass.—Preliminary work has been started on new highway from Turner's Falls to this city.

Taunton, Mass.—An ordinance for the appropriation of \$8,000 for the improvement of highways is being considered by Council.

Iron Mountain, Mich.—A special election has been called June 10 to vote \$100,000 bonds for new highways.

Duluth, Minn.—Several of the Aldermen are opposed to paving Third street with plain macadam; Twentieth avenue east is to be improved by paving.

Cartersville, Mo.—Plans will be prepared for seven blocks of brick paving on Main street.—L. H. Jaynes, Mayor.

Asbury Park, N. J.—The Council has not as yet reached a decision in regard to the material to be used in paving a number of streets.

Jersey City, N. J.—The Street and Water Board has adopted specifications for the opening of Seaman avenue, from St. Paul avenue to Dey street. The old proposition to open Wegman place, between Jackson and Ocean avenues, has been sidetracked and a new petition has been drawn up, presented and favorably acted on.

Lambertville, N. J.—Council has ordered the Street Committee to begin at once the work of macadamizing the portion of North

Union street, between Elm and Cherry streets.

Perth Amboy, N. J.—Ordinance has been introduced for the paving of State street from Smith street to the Lehigh Valley bridges.

Westfield, N. J.—A proposition is being considered to pave Broad street with vitrified brick.

West Hoboken, N. J.—Council has decided that Clinton avenue, from Paterson plank road to Smith street, and from curb to curb of said avenue, excluding, however, that portion between the present car tracks shall be repaved by removing therefrom the wearing surface of asphalt and the binder already upon street and by laying bitulithic pavement upon the present concrete foundation, between the curbs and a point one foot outside of each rail of the present car tracks and by repaving the one foot outside of each rail of the present car tracks with block pavement.—Richard J. Lynch, Mayor; John P. McMahon, Town Clerk.

Albany, N. Y.—Residents of Rensselaer are interested in improvements to part on upper Second street.—Address Common Council.

Auburn, N. Y.—Council has taken preliminary steps for the paving of Garden and William streets.

Bolivar, N. Y.—At a special election it was voted to macadamize Main street for a distance of 2,000 feet at a cost of \$5,500.

Brooklyn, N. Y.—The Board of Estimate and Apportionment has appropriated \$140,000 from its bond issues for the repaving of Jamaica avenue, from Van Wyck avenue, the westerly boundary of the old village of Jamaica to the Brooklyn line; it is proposed to take up the present brick pavement and to relay with granite blocks.

The Local Improvement Boards of Flatbush and New Lots districts are considering petitions for paving Fifty-third street with asphalt on concrete foundation, between Tenth and Eleventh avenues and between Eighteenth avenue and West street; Fifty-fifth street, between Fort Hamilton and Seventeenth avenue, and Washington Cemetery, with asphalt.

The Flatbush Local Improvement Board, at a recent meeting in Borough Hall, adopted resolutions providing for the paving of Coney Island avenue, from Avenue G to Neptune avenue, and Boston avenue, from Fifteenth to Twenty-fifth avenues.

Canisteo, N. Y.—The question of good roads is now being discussed.

Dunkirk, N. Y.—The matter of paving Dove and Ruggles streets is being considered; it has not yet been decided whether brick or asphalt will be used.

Little Falls, N. Y.—Plans are under way for ten miles of good road, from Webb along Fulton Chain to McKeever, a distance of about 19 miles.

Lockport, N. Y.—The Street Committee of Council has recommended that the plans and specifications for the paving of Chestnut street, as made by the City Engineer, be adopted.

Niagara Falls, N. Y.—The bids received by the Board of Public Works for the paving of Pine avenue, between Twenty-second and Sugar streets, were not opened, owing to a change in the plans because of the action of the International Railway Company; bids will be readvertised at once.

The Board also ordered bids advertised for a pavement on Eighteenth street, between Pierce and Ontario avenues, at an estimate of \$28,803, of which \$4,155 will be for street intersections; also for the paving of the alley between Main and Tenth streets, between Cleveland and Niagara avenues, at a cost of \$1,305; also on Cleveland avenue, between Main and Twenty-second streets, and on Twenty-second street to Niagara, at a cost of \$49,459, of which \$7,692 will be for street intersections.

Council notified the Board that the action toward paving Eleventh street to Pine avenue had been rescinded.

City Engineer Robbins estimates the cost of a pavement on Portage road, between Niagara and Nineteenth streets, at \$22,238.55, of which \$9,681 will be assessed on the frontage, \$3,423 on the street intersections and \$9,323.75 on the street railway company.

The Engineer has been directed to prepare estimates on the cost of a pavement on Ontario avenue, based upon a street width of 32.84 feet; also an estimate on paving Tenth street, from Cedar avenue to the Erie tracks, it being desired that the city have one good roadway for the passage of the Tenth street Fire Department to the city's milling district. The plan for Eleventh street having been dropped, it is proposed to use Tenth street. But one or two intersections would have to be paved, hence the cost to the city would be small.

Oneonta, N. Y.—Plans are being prepared and bids will be received by Henry D. McLaury, Village Clerk, for the construction of a concrete macadam pavement on Main street to the easterly corporation line, also for sewer or sewer system on Chestnut

street, extending from Clinton street west to corporation line.

Penn Yan, N. Y.—The County Commissioners, in conjunction with the State Highway Commissioner, will probably have a State road (birch) constructed through the county; estimated cost, \$10,000 per mile.

Rochester, N. Y.—Council has passed ordinances for Medina block pavement, curb and surface sewers, etc., in Joseph avenue, at estimated cost of \$49,000; in Hawley street, \$37,500, and in Plymouth avenue, \$23,000; also brick pavement, etc., in Plymouth avenue, \$20,000; Schaffer street, \$8,000; for resurfacing with trap rock Jefferson avenue, \$5,000, and for Portland cement walks in Earl street, \$2,400; Erath street, \$800; St. Stanislaus street, \$2,600; Sobieski street, \$1,300; Kosciuszko street, \$1,300; Exchange street, \$3,200, and Manhattan street, \$2,000.—William Ward, City Clerk.

The proposed West Side boulevard from this city to the lake will cost about \$40,000 and be nearly five miles long.

The property owners are in favor of using trap rock paving for Linnet street; the streets will be paved between Glenwood and Lexington avenues.

Syracuse, N. Y.—The Sedgwick Farm Land Company has voted to improve its residence tract on James street hill by laying two miles of macadam road and a like mileage of cement sidewalks.

Troy, N. Y.—The matter of paving King street is being considered.

Utica, N. Y.—Council has passed ordinances for paving quite a number of streets, this being the final action; the city will now advertise for bids for doing the work, and figures will be submitted for all kinds of pavement. Then the contract will be let by the Board of Contract and Supply, and after five days expire in which property owners may get the contract by bidding 15 per cent. less, the work of construction will begin. The paving ordinances adopted follow: Walter street, from Salina to Hoyt street; Walter street, from Hoyt street to Potter street; Water street, from Hotel street to Washington street; Burnet street, from Bleeker street to Elizabeth street; Parker street, from Clinton street to Jason street; Matthews avenue, from Whitesboro to Caroline street; Walker street, from Oneida to Kemble street; Hubbell street, from Bleeker to Elizabeth; Jefferson avenue, from Bleeker to Rutger; Spring street, from Huntington street to Fay street; Eagle street, from Conkling avenue to St. Vincent street; St. Vincent street, from South street to the West Shore Railroad; Arthur street, from Seymour avenue to Taylor avenue; Bleeker street, from end of present pavement to the city line; James street, from Steuben street to Miller street; Miller street, from James street to a point midway between James and Pleasant streets; West street, from James street to a point midway between James and Pleasant streets.

A petition to pave James street as far as possible was referred to the Paving Committee.

The following streets were ordered graded: Young place, Randolph place, Eagle street, from Mohawk to Kossuth avenue.

Southport, N. C.—The citizens voted recently to issue \$12,000 of bonds for road construction.—W. H. Pyke, Chairman Board of Trustees.

Alliance, O.—The Board of Public Service has decided to readvertise for bids for the paving of Patterson street and South Lincoln avenue and the building of sewers Nos. 98, 99, 100 and 101; the reason for this action was the discovery that the former advertising did not allow the legal length of time required in advance of opening bids.

The Finance Committee of Council has awarded city bonds as follows: \$22,000 street improvement bonds, to Security Savings Bank, Toledo, \$301 premium; \$14,000 paving and intersection bonds to Western German Bank, Cincinnati, \$1.10 premium; \$5,100 sanitary sewer bonds to Alliance Bank Company, Alliance, \$36.72 premium; \$4,000 sanitary sewer bonds to W. R. Todd & Co., Cincinnati.

Arcadia, O.—The Town Council has decided to pave the main street with vitrified brick; the street is about 1,700 feet in length; plans are being made by Engineer Stringfellow.

Ashtabula, O.—Bids will be received June 22 for \$7,800 3 per cent. bonds, \$2,000 5 per cent. bonds for paving purposes.—Jacob Calin, Mayor.

Ashtabula, O.—Plans for the Lake street subway have been approved by the Chief Engineer of the Lake Shore Road, Samuel Rockwell of Cleveland; the improvement will be commenced this summer.

Council has voted to change the material for the pavement of Market street from asphalt block to vitrified brick; property owners of Chestnut and Spruce streets have asked for a similar change.

Bucyrus, O.—Proposals will be received June 23 for \$20,000 street improvement bonds.

Cambridge, O.—It is likely that North Eighth street will be paved the coming summer; preliminary legislation is to be immediately introduced.

Weill, Roth & Co., Cincinnati, have purchased \$49,923 4½ per cent. Cambridge street improvement bonds at a premium of \$240.

Canal Fulton, O.—F. C. Myers, Consulting Engineer, Canton, is preparing plans and specifications for paving and sewers.

Carrollton, O.—Plans for paving West Main street are being prepared by F. C. Myers, Consulting Engineer, Canton.

Conneaut, O.—F. T. Caughlan, one of the Commissioners of this county, states that the improvement of the center road between here and Monroe will not be dropped; steps will be taken with the Ohio Highway Commission and County Commissioners looking to this important improvement.

Coshocton, O.—Bids will be received for the purchase of \$50,000 4½ per cent. county road bonds.—C. R. Randles, County Auditor.

Dayton, O.—The Dayton City Railway Company, which will construct a line extending from Southeast Dayton to Northwest Dayton, has been granted permission to construct tracks on Lehman street, and will build a retaining wall along the Miami River at that point.

The matter of paving Ludlow street, from Washington to Stout street, with brick is being considered.

Elyria, O.—Council has adopted the report favoring the paving of East and West avenues to the city limits, and also the paving of Huron streets; the first two will probably be asphalt; the water, sewer and gas connections on these streets are to be installed this year.

Findlay, O.—Arcadia, east of here, will pave its main street this year; the distance is 1,700 feet.

Follansbee, O.—Council will be asked to take action in paving of Main street this summer.

Galion, O.—Engineer G. Bradbury, of Columbus, has been instructed to prepare plans for the improvement of West Main street with brick and asphalt.

Hamilton, O.—Bond issues are to be authorized to pay the cost and expense of a large number of paving and sewerage improvements.

Maple avenue, from Third street to Tenth street, is to be paved with sheet asphalt.

Lorain, O.—Ordinances for issuing \$57,500 bonds have passed Council, the largest issue being for the Franklin street paving, \$26,000; the others are \$15,000 for dredging the river; \$13,500 for paving Washington from Second to Sixth avenue, and \$3,000 for the construction of lateral sewers in Apple, Brownell and Fifth streets.

The Clerk has been instructed to readvertise for bids for the paving with macadam of Tenth avenue, the object being to widen the street.

Marietta, O.—St. Clair street is to be paved, and the estimate of the cost of paving Green street, amounting to \$12,000, has been accepted; bids for these improvements will soon be invited; it will cost \$4,000 to repair the Maple street extension.

Martin's Ferry, O.—Ordinances have passed Council declaring it necessary to pave about a dozen more streets, and work will be started this summer.

Norwood, O.—Council has taken final measures to improve Main street with granite from Carthage avenue to the south corporation line; the granite is to be placed on a concrete foundation, and it is now figured that the cost will be \$200,000 instead of \$150,000, as was first estimated by City Engineer Stewart.

Perrysburg, O.—Engineers Riggs & Sherman, 613 Nasby Building, Toledo, have prepared preliminary plans for paving Louisiana street, about five blocks in length; bids will be received about July 1.—F. E. Bowers, Mayor; W. E. Escott, City Clerk.

Ravenna, O.—Council has decided to improve certain portions of East Main, Chestnut, North, Sycamore and Cleveland avenue by paving with brick or asphalt block.

Reading, O.—The village will expend a large amount this summer repairing defective sidewalks and crossings, etc.

Richwood, O.—R. L. Jordan states that Council has decided on a bond issue, proceeds from which are to be applied for curbing, grading, paving and draining the streets.

Steubenville, O.—The Engineer is preparing plans for sewers and a number of alleys and for considerable amount of paving, bids on which will be invited as soon as plans are completed.

Toledo, O.—Before many months the suburban towns of Maumee and Perrysburg will boast of paved streets; the Perrysburg Council has passed an ordinance for the paving of Louisiana avenue, from Front street to Sixth street, and the Council of Maumee has voted to pave Conant street, from the river bank to the canal, a distance of about one-half mile; both pavements will be con-

structed of vitrified brick; the Riggs & Sherman Company of Toledo has been engaged to take care of the engineering work on both contracts.

Wooster, O.—The Board of Public Service has been authorized to select the material for the sidewalks which it is proposed to construct in this city; it is likely that either brick or cement will be chosen. Preliminary legislation has been introduced to pave Beal avenue; the Engineer is also preparing plans for paving, and other improvements are to be made.

Youngstown, O.—Council has enacted legislation calling for the paving of High and Regent streets; Garlick street, from Mahoning avenue to Marshall street, is to be graded and paved.—A. W. Craver, Mayor; M. F. Hyland, Clerk.

Chandler, Okla.—E. G. Dennis is interested in the good roads movement.

Shawnee, Okla.—Bids have been ordered advertised for 100 blocks of asphalt brick and granitoid paving.

Ashland, Ore.—All bids for paving with bitulithic pavement have been rejected by Council.

Eugene, Ore.—Council is considering the paving of a number of streets, including East Fifth, East Sixth, West Eleventh and Olive streets.

Allentown, Pa.—Council has passed ordinances for paving West street, from Hamilton street to Walnut street, and for setting and resetting curb stones wherever necessary; also on Madison street, from Walnut street to Union street.

Ligonier, Pa.—E. C. Ramsey, Borough Clerk, invites bids for 6,000 linear feet of curbing, specifications being like those of Greensburg as presented to Council by I. U. Stahl for cement curb, and for stone curb, like those of Latrobe; the State Highway Department, through State Engineer H. H. Hallman, has promised to proceed with the paving of Market street and Diamond Park as soon as the borough completes the necessary curbing.

McKeesport, Pa.—The County Commissioners have sold \$1,000,000 bonds for new county road construction.

Montoursville, Pa.—The Montoursville Trolley Company will take up the matter of paving with macadam between the trolley tracks this Summer.

New Castle, Pa.—An ordinance has passed directing the paving of Sycamore street from Orchard street to Louis street, and Rose street, from Sycamore street to Kaighn avenue, with sheet asphaltum on a concrete foundation.—Chas. S. Wolverton, President of Council.

Pittsburg, Pa.—The County Commissioners have decided to let road contracts to the amount of about \$220,000 immediately, or as soon as it can legally be done. The contracts are being advertised and the letting will take place about the middle of the month. It is expected that work can be started very shortly after that time. In addition, a large number of surveys will be submitted for action by the Grand Jury at the June term. This means that the contracts for some of these will be let early in August. Although a very late start is thus being made on account of the difficulty of disposing of bonds, the Commissioners are confident a great deal of work will be done before the end of the season. The contracts advertised are four in number, as follows: Little Dear Creek Valley road, 8.6 miles; Perrysville plank road, 2.5 miles; State road, 1.25 miles; Leechburg extension, 2 miles; total, 14.35 miles. These contracts are expected to be let at the rate of about \$15,000 a mile.

The list of improvements which it was decided to send to the June Grand Jury follows: Little Pine Creek extension No. 2, 2.6 miles; Miller's Grove and Clairton, 8.6 miles; Broughton and Cochran Mills, 2.9 miles; Port Vue and Lovedale, 3 miles; Munroeville and Pitcairn connecting, 1.1 miles; Munroeville and Trestle, 3.4 miles; Evergreen and Lowries Run connecting, 1 mile; Steubenville pike and Enlow (via Cliff Mines), 3.1 miles; Freeport (Section 5), 2.5 miles; Pangburn Hollow, 1.8 miles; Boughton and Library connecting, 2.41 miles; Dorseyville and Culnerville, 6.45 miles; Three Degree, 7.2 miles; Steubenville Pike extension (Craffton), 1.01 miles; Windgap, 1.4 miles; McCoy, 1 mile; total, 49.47 miles.

Contracts for repaving three North Side streets with asphalt were not awarded when the remainder of the repaving work was let by Mayor Guthrie, because in every case the bids exceeded the amount of the appropriation.

Pittsburg, Pa.—A special committee of Select Council, composed of Richard Armstrong, George C. Gertz and C. D. Tilbury, recently held a conference with Mayor Guthrie and Director Shepherd, to discuss the North Side project of extending Federal street through to Perrysville, a scheme that would cost the city in the neighborhood of

\$1,000,000; it is proposed to submit the matter to the voters, together with the City Hall proposition and other items of the people's bond issue.

Pittston, Pa.—Bonds, \$50,000, will be sold for paving or repaving North Main street, from Mill street to Union; bonds, \$3,000, will also be issued for paving from the forks of the road at South Main street to the city line.

Rochester, Pa.—Advertisements for sewer-ing and grading are to be published shortly and it will be specified that American labor be employed.

Scottsdale, Pa.—Spring street will probably be paved, the estimated cost for a mile of work being \$20,000; the Finance Committee is considering the matter of raising funds for the purpose.

South Sharon, Pa.—The ordinance for the paving of Haywood street has passed Council and will start this summer; Sharon contemplates the paving of Dock street down to the South Sharon borough line, where Dock abuts on Broadway. At that end of Broadway about two squares are unpaved, and there is no doubt but that the South Sharon Council will complete the paving when Dock street is finished.—Address City Engineer Miller.

Spring City, Pa.—The borough will pave Main street with vitrified paving brick on concrete foundation.—Charles Cobb, President Town Council; J. V. Poley, Borough Engineer, Royersford.

York, Pa.—There is a proposition on foot to pave at the expense of the abutting property owners that portion of East Market street, from Queen street eastward to the city limits; Market street, between Duke and Queen, will be repaved in a short time with sheet asphalt, the property owners paying for it. If the larger section is paved it will mean that the city will be obliged to make a loan for the paving of street intersections. It is probable that the East Market street paving will be followed by many others.

Slatington, Pa.—The Legislature is to appropriate nearly \$50,000,000 for improvements to State highways during the next ten years.

Tarentum, Pa.—The County Commissioners will be able to dispose of \$1,000,000 worth of bonds, to be used in improving and repairing the roads in this vicinity. Sixty miles of road are to be built this year, and Superintendent George T. Barnsley can be addressed for further information.

Bristol, Tenn.—The Election Commissioners have fixed June 20 as the date for an election to determine whether or not Sullivan County will issue \$100,000 in bonds for the construction of pike roads; the court has determined the manner of distributing this fund over the county; it is intended to mark the beginning of good road building in the county.

Memphis, Tenn.—In order to pay for street improvements already completed and to further carry on the work under the front foot assessment plan, the city will issue \$50,000 in certificates; these certificates will be placed on the market for sale just as bonds and will bear interest at the rate of 6 per cent. per annum and will fall due in one, two and three years.—Address City Register Ennis Douglass.

Austin, Tex.—The County Commissioners have ordered an election June 29 to vote on issue of \$250,000 bonds for improving roads and building bridge across the Colorado River.—Address County Auditor.

Fort Worth, Tex.—As a result of a disagreement between the city officials and the company doing the paving work in this city, the Texas Bitulithic people will withdraw from the city, leaving all their present contracts, covering about six miles of paving, unfulfilled.

Houston, Tex.—Nearly twenty-eight miles of road are to be improved in Harris County at a cost estimated at \$275,000.

Mason, Tex.—A new road has been ordered built from Mason to Kimble County line, to be about twenty miles long.

San Antonio, Tex.—An election will be held June 15 to decide the question of issuing \$250,000 Bexar County road bonds.—Address County Auditor.

Taylor, Tex.—Through the efforts of the Goods Roads and Improvement Association, \$25,000 bonds were issued for good roads in this town and vicinity.

Emporia, Va.—The good roads movement is being discussed and arrangements for securing funds for the improvements are under way.

Norfolk, Va.—The Finance Committee of Council has recommended that \$9,200 be appropriated for paving Redgate avenue and \$3,400 for paving and curbing of Gibbs and Tunstall avenues.

Ft. Columbia, Wash.—The Constructing Quartermaster has been instructed to make repairs to the main county road.

Tacoma, Wash.—The matter of paving Meridian street is being considered.

Beloit, Wis.—\$40,000 has been appropriated for good roads in this section.

La Crosse, Wis.—The Board of Public Works has been authorized to advertise for bids for constructing sidewalks at the school buildings, at corner Hayes and Woods streets and Farnum street and the Mormon coulee road.—H. J. Beckwith, President.

Racine, Wis.—It is very probable that \$50,000 bonds will be voted for paving purpose in the Tenth Ward. A petition has been presented to Council asking for the paving of Hamilton street.

Montreal, Can.—It is probable that a movement will be started as a result of an appeal made by representatives of the transportation company of this city, for the paving of many of the leading business streets.

SEWERAGE

Berkley, Cal.—The Board of Trustees has adopted a resolution providing for the construction of a six-inch vitrified ironstone pipe sewer in Piedmont avenue.

Elmhurst, Cal.—It is proposed to issue \$75,000 bonds for the construction of a sewer system.

New Haven, Conn.—City will lay a sewer under York square and plans are being made for the work.

New Britain, Conn.—The Board of Public Works has reported as follows: Ordering the Sewer Commissioners to make storm water connections on Sumner street; Chestnut street, between North Stanley and East street; on Cherry street, between Pine and East streets.

The Sewer Commissioners have been ordered to make storm water connections in North Stanley street, between Smalley and Hurlburt street.

West Tampa (Tampa Postoffice), Fla.—The city has voted in favor of issuing \$20,000 of bonds for the construction of sewers.

Aledo, Ill.—The Board of Local Improvements is considering the construction of sanitary sewerage system.

Farmer City, Ill.—Plans are being considered for the construction of a sewer and drainage system, to cost \$47,000.—W. W. Smith, Engineer.

Hillsboro, Ill.—The City Clerk states that about \$30,000 will be expended in sewer construction in this city.—F. A. Bond, Engineer.

Homer, Ill.—The question of constructing sewers is being agitated.

Mt. Vernon, Ill.—Plans are being prepared by City Engineer Maxey for the construction of a vitrified pipe sewer system, at an estimated cost of \$45,000.

Silvis, Ill.—H. G. Paddock has completed surveys for a sewer system to empty into Rock River.—Address President Walsh, of the Village Board.

Waukegan, Ill.—An ordinance was passed authorizing the construction of sewers in portions of Cummings avenue; also for a storm water sewer in portion of Washington street.—H. Thacker, City Clerk.

South Bend, Ind.—Plans have been approved for trunk sewers in Meade street and Prairie avenue; estimated cost, \$80,000 and \$15,000, respectively.—A. J. Hammond, City Engineer.

Vincennes, Ind.—The Board of Works, at a recent meeting, discussed the erection of a new garbage and sewage disposal plant.

Salina, Kan.—A petition has been presented to Council asking for the construction of a sewer on Washington avenue, between Eleventh and Tenth streets.

Topeka, Kan.—O. Swanson, 808 East Eighth avenue, is circulating a petition for the construction of a sewer in the Second Ward east of the Santa Fe tracks.

Covington, Ky.—A 15-inch vitrified stone-ware pipe sewer has been ordered laid along Philadelphia street, from the end of the present sewer to 20 feet north of Seventh street, at an estimated cost of 80.8 cents per foot, or a total cost of \$1,198.

Brockton, Mass.—A petition has been received by the Sewerage Commission for the construction of a sewer in Summer street, near Edson street.

Holyoke, Mass.—The Board of Aldermen has authorized a loan of \$4,000 for sewer construction.

Milford, Mass.—The Sewer Commissioners are discussing the possibility of building the Claflin street sewer at once.

North Adams, Mass.—The matter of appropriating money for sewers is being considered by Council.

Worcester, Mass.—City Engineer McClure suggests running water and sewage disposal in connection with the rifle range in Shrewsbury.

Battle Creek, Mich.—A resolution was adopted by the Board of Public Works providing for the construction of a sewer on West Main street, from the Tabernacle to Cass street.

Grand Rapids, Mich.—A sewer is to be constructed in Lambert court, from 60 feet east of Grandville avenue to east end of Court; also in Finney street, from Williams

street to Wealthy avenue.—Geo. C. Peirce, President, Board of Public Works.

Crookston, Minn.—It is probable that Council will shortly consider the matter of putting in a new sewer to replace the present big Third street sewer, passing under the tracks of the Great Northern, and which has been repaired for temporary use; the City Engineer's estimate, \$30,000.

St. Paul, Minn.—Bids will shortly be asked for the construction of 1,320 feet of 15-inch sewer in Cretin avenue, from Marshall avenue to Rondo street.

Cranford, N. J.—The Township Committee has ordered the construction of a sewer in Woodlawn avenue and High street.

Newark, N. J.—It is probable that an amendment will be filed to act providing for trunk sewer to take care of sewage going into the river, which would require Jersey City and others to stop sewerage into Newark Bay.

The Board of Public Works contemplates the construction of a 10-inch sewer in Grant avenue, Lawton street and Sheridan avenue, between Clinton place and Demarest street.

Roselle Park, N. J.—The Borough Council recently discussed the matter of the proposed bond issue for sewer construction.

Brooklyn, N. Y.—At joint meeting of the Local Improvements Boards of the Flatbush and New Lots districts petitions were considered for the construction of sewers in Fifty-fourth street, between Fort Hamilton parkway and Eleventh avenue, between Nineteenth avenue and Washington Cemetery and between Fifteenth and Seventeenth avenues, with an outlet sewer in Twentieth avenue, between Fifty-fourth and Sixtieth streets; also in Fifty-fifth street, between Eleventh and Twelfth avenues and between Seventeenth avenue and Washington Cemetery.

Harway avenue, between Forty-fifth and Bay Forty-seventh streets, is under a foot of water; attempts have been made to have the city put in sewers and catch basins, but nothing has yet been done.

Brockport, N. Y.—At meeting of the Village Board a letter was read from State Commissioner of Health Dr. Eugene H. Porter, in which he recommends the immediate repair and improvement of sewage disposal plant.

Buffalo, N. Y.—The Board of Aldermen has granted permission to S. B. Couch to construct a tile sewer in the southwest side of Galloway street, between Indian Church road and 215 feet northwest, at his own expense; the work is to be done under the direction of the Commissioner of Public Works.

Dunkirk, N. Y.—Council has decided to act favorably on the recommendation of the Board of Health to extend sewers further into the lake; bids will be asked on the work.

Mt. Morris, N. Y.—The taxpayers propose to expend \$200,000 for water and sewer system; M. B. Baker has been directed to prepare plans.—John F. Connor, Village Attorney.

Mt. Vernon, N. Y.—Governor Hughes has signed Legislature bill of Assemblyman Wright, authorizing Mt. Vernon to issue \$15,000 bonds for constructing a sewage disposal plant.

North Tonawanda, N. Y.—A. P. Smith, City Engineer, has completed plans and estimates for the proposed new sewer system for Rumboldt avenue, to cost \$29,000.

Oneonta, N. Y.—Plans are being prepared and bids will be received by Henry D. McLaury, Village Clerk, for the construction of sewers.

Oswego, N. Y.—City Engineer Snyder is preparing plans for a sewerage system for the eastern part of the city and providing for trunk sewers to extend from Hall road to the lake; cost about \$108,000; bids will be called for in about sixty to ninety days.

Rochester, N. Y.—Council has passed ordinances for constructing Jennings and Clifford street sewer with manholes, etc., at estimated cost of \$20,000; Carthage alley sewer, \$1,200, and Goodman street sewer, \$2,200.—William Ward, City Clerk.

Syracuse, N. Y.—Council has adopted a resolution providing for the construction of sewers in Buena Vista street, Howard and in Leon street.

Utica, N. Y.—Commissioner of Public Works Dwyer recommends that this work be done and ordinances for it will probably be passed by Council: Fifteen-inch sewer in Bacon street, from Broad street to Center street; 12-inch sewer in Hodge street, from Bertram avenue to Dwyer avenue; have the West Shore Railroad abate the nuisance at 200 Steuben street in the form of cesspools by building 75 feet of sewer to connect with that on Steuben street; new sidewalk south side of Square street, from Brinkerhoff avenue to Taylor avenue; new sidewalk at 95 Taylor avenue.

A 12-inch sewer was ordered laid in Lansing street, from end of present sewer west

of Morris street, to a point 67 feet west; also an 18-inch sewer in Whitesboro street, from Washington street to Seneca street; sewer in Eagle street, from Conkling avenue to a point about 125 feet easterly.

Ashtabula, O.—Assistant City Engineer Frank Blair states that preliminary surveys are being made for West End sewers.

East Liverpool, O.—The Street Committee has been instructed to lay an 8-inch sewer in the West End and will advertise for bids for this improvement at once.

Gallon, O.—The city will issue \$8,000 bonds for establishing a sanitary sewer system, including trunk and intersecting sewers and disposal plant.

Hamilton, O.—Bonds are to be authorized for a large amount of sewer and pavement improvements.

Ironton, O.—R. H. Gamble, Constructing Engineer, estimates the cost of constructing sewer system at \$35,000; plans will be investigated and, if practicable, adopted.

Lockland, O.—The Village Council has authorized a sale of \$48,000 bonds for the construction of the sewer system in the southern and central portions of the village.

Lorain, O.—A resolution to extend the Oberlin street sewer has been passed by Council; the sewer will run from Fox street to a point south of Bank street.

Steubenville, O.—Sewers are to be constructed in districts Nos. 1 and 2; plans to be prepared at once.

Warren, O.—Steps looking to the improvement of Mason street by the construction therein of sewers have been taken by Council.

Wyoming, O.—Council has passed a resolution for the issue of \$48,000 bonds for the construction of a sewerage system.

Youngstown, O.—Council has adopted an ordinance for constructing a sewer on Cassius avenue, from McGuffey street to west line of city lot No. 15,453.—H. C. Higgins, President of Council.

Bids will be received June 15 for the purchase of \$21,000 water main extension bonds and \$16,800 Mahoning avenue sewer bonds.—Wm. Davis, City Clerk.

Paul's Valley, Okla.—Bonds amounting to \$45,000 have been sold and work on the sewer system will shortly be started.

Ponca City, Okla.—The city has disposed of \$32,500 of bonds, a part of which will be used for a sewer system.

Carlisle, Pa.—Council has passed ordinance authorizing a vote on the borrowing of \$60,000 to install a sewerage system.

Cambridge Springs, Pa.—In the matter of extending the main sewer outlet to a point below the water works intake, Attorney Bolard has reported that the State Board of Health would grant a permit for such extension as soon as the borough has filed its plans and specifications in the Department. The Sewer Committee has an engineer now at work on the detail data needed by the State Department, and this will soon be ready for submission.

Doylestown, Pa.—The Borough Council will take action to compel the sewerage company to abate the sewerage nuisance near the corner of Church and Ashland streets; some time ago Manager Thomas promised that a proper kind of sewage disposal bed would be put in, but nothing has been done.

Evans City, Pa.—At a special election the town voted almost solidly in favor of an increase of the bond issue for the purpose of making improvements to the sewerage facilities of the town, the vote being 199 for improvements to 6 against.

New Castle, Pa.—Sewers, culverts or drains are to be constructed in Stewart street, from East State to High street.—I. V. Bradley, Clerk of Council.

Perkasie, Pa.—The Town Council has granted a franchise to Mahlon Keller and P. S. Cressman for the construction and operation of a sewerage system.

Rochester, Pa.—A communication was read before the Town Council from Dr. Samuel P. Dixon, peremptorily demanding that the plans of the sewer systems for Rochester be furnished him at once, stating that on several occasions this had been requested, but no attention was paid; the communication has been answered by Secretary Doncaster, saying that no such requests had been received by the Clerk, but had doubtless gone to some other person; blanks were requested, and all desired information will be furnished at once.

Scranton, Pa.—Property holders on Pittston avenue are considering the matter of building a private sewer on that thoroughfare.—Dr. John J. Walsh may be addressed.

Providence, R. I.—The Board of Aldermen has appropriated an additional \$100,000 for the construction of sewers.

Redfield, S. D.—Bonds, \$18,000, will be voted for installing a sewer system.

Park City, Tenn.—The citizens voted \$25,000 bonds for the construction of sewers.

Fort Worth, Tex.—The matter of constructing sewers on Rusk and Throckmorton streets is being considered.

Haskell, Tex.—Council has decided to submit a vote to the people on a bond issue for putting in a sewerage system.

Houston, Tex.—Residents of the Fifth Ward are agitating the matter of securing a complete sanitary sewer system for that section.

Bellingham, Wash.—The Engineer's preliminary estimate of the cost of laying a sewer in the alley between Fifteenth and Sixteenth streets, from Adams avenue to Olive street has been accepted by Council.

Moundsville, W. Va.—Charles E. Collins, Engineer, Philadelphia, Pa., is preparing plans for Council for the sewerage of the city.

Milwaukee, Wis.—The Board of Public Works has recommended to Council the construction of a pipe sewer in Lee street, from the connection with sewer in Bolton street to the right-of-way of the Chicago, Milwaukee and St. Paul Railway; pipe sewer in Buffum street, from north line of Kurth's addition to Concordia avenue, and for construction of pipe sewer in Bishop avenue from a point 12 feet north of Nock street to a point 12 feet south of Pryor avenue.—J. M. Crowley, Deputy Comptroller.

WATER SUPPLY

Gadsden, Ala.—J. N. Hazlehurst of Atlanta, Ga., is preparing plans for improved water system, estimated to cost \$100,000.

Tuscaloosa, Ala.—Bonds will be issued for the construction of a water works system.

Benton, Ark.—The Iron Mountain Water Company has decided to increase the water supply; a 100,000-gallon water tank will be erected and several wells sunk.—Address Secretary, Iron Mountain Water Company.

Yuba City, Cal.—The Town Trustees have directed an engineer to prepare estimates for water system.

Canon City, Col.—Bids will be opened at once for the new water system.

Denver, Col.—Specifications have been filed with the State Engineer for the Three Crackers Reservoir and ditch line in Park County; the reservoir is to cost \$120,000.

Holly, Col.—Council has voted to bond the city for the purpose of installing a water works; a special election will be held June 9 to vote on the proposition.

Tampa, Fla.—The city of West Tampa will issue \$40,000 bonds for the extension of the water works.—Address the Mayor.

Alma, Ga.—A plan for a city water works is being considered.

Atlanta, Ga.—Alderman Beutell has introduced a resolution in Council calling for an appropriation from the water works bond fund, with which to purchase a 20-inch water main, to be laid on Forsyth street.

Sylvestor, Ga.—Council will offer for sale \$30,000 5 per cent. 30-year water works bonds.

East Moline, Ill.—Council is planning to expend \$30,000 in laying new water mains.

Joliet, Ill.—The Board of Local Improvements has authorized the Clerk to advertise for bids for construction of Franklin and Ohio streets water mains.

Evansville, Ind.—A mechanical filter will be constructed for the city. The Board of Water Works Trustees having passed a resolution asking that Owen Ford, the St. Louis expert, be summoned to Evansville to take charge of the construction.

Davenport, Ia.—Mayor Andrew Olson recommends that the city acquire the strip of land between the present water works plant and the park on the river front for enlargement of the municipal water works; also that a location be obtained for an additional reservoir and a standpipe on a suitable elevation.

Dike, Ia.—Plans and specifications are being made for the city water works, to be completed this year.

Sloan, Ia.—Council has decided to call a special election to vote on issue of bonds for the improvement and extension of the water works system.

Spirit Lake, Ia.—Plans are now being prepared by Oscar Claussen, Engineer, St. Paul, for a water works system.

Baldwin, Kan.—Council is preparing to establish water system.

Concordia, Kan.—Spitzer & Co., of Toledo, have purchased \$32,000 5 per cent. Concordia water works bonds at a premium of \$200.

Moundridge, Kan.—Plans and specifications for water works and electric lighting plant are being prepared by Burns & McDonnell, Scarritt Building, Kansas City, Mo.; bonds are to be voted as soon as estimates are submitted.

Russell, Kan.—Plans and specifications for water works and electric lighting plant are being prepared by Burns & McDonnell, Scarritt Building, Kansas City, Mo.

Solomon, Kan.—Plans for a water works and electric lighting plant are being prepared by Burns & McDonnell, Scarritt Building, Kansas City, Mo.; bonds are to be voted.

Winfield, Kan.—Burns & McDonnell, Scarritt Building, Kansas City, Mo., are preparing plans for settling basin and filter plant.

Carrollton, Ky.—The First National Bank of Carrollton has purchased \$20,000 5 per cent. Carrollton light and water bonds at a premium of \$701.

Mayfield, Ky.—The water plant was recently destroyed by fire.

South Paris, Me.—Charles F. Chase, Engineer, has just completed a survey of the proposed water works system to be installed in this town; the cost of the work is estimated at about \$55,000.

Brunswick, Md.—Estimates are being prepared for improving water system, which includes water mains, artesian well, engines and pumping machinery; \$16,000 bonds have been voted.—Address Clerk, Water Board.

Gloucester, Mass.—Council has received a communication from the Water Board requesting an appropriation of \$11,000 for constructing and reconstruction.

Grand Rapids, Mich.—The Board of Public Works has secured the services of Williamson & Crow, who will be the architects to remodel the pumping station, coal sheds, repair shops and other city buildings at a compensation of 3½ per cent. of the total amount of the changes to be made; in this connection these architects will also do the inspection work.

East Lansing, Mich.—Council has directed S. C. Haddon, City Engineer, to prepare plans for a city water system for domestic purposes only; the State Board of Agriculture has decided that the city cannot make use of the Agricultural College water system after January 1 next.

Hubbell, Mich.—Points are being driven for the proposed water system.

Chisholm, Minn.—The matter of securing a permanent water supply for the town is being considered by Council.

Springfield, Minn.—Council will secure an engineer to prepare estimates for water system, for which \$21,000 bonds have been voted.

Independence, Mo.—The private company owning the water system in the city will make improvements.—V. B. Robinson, Superintendent.

Springfield, Mo.—The citizens have voted \$21,000 bonds for water supply.—Address Recorder.

Grand Forks, N. D.—Bids will be readvertised for the water works bonds.

Alden, N. Y.—Plans are being prepared for extension to the water system, and bids will be called for at once by John Kirk, Secretary Water Board, for quantity of cast-iron pipe and hydrants; work will be done by day labor, in charge of City Engineer.

Jamestown, N. Y.—Council has passed a resolution submitting a bond issue to vote of people to raise \$42,000 for water extensions.

Rochester, N. Y.—Secretary Pifer has been directed to advertise for bids on a contract for cleaning the Holley water mains; the mains have not been cleaned since they were laid thirty years ago, and it is pointed out that the pressure will be increased.

Dresden, O.—The village has decided to use the well system in establishing new water works system; 220,000-gallon reservoir is to be constructed; the cost of the entire plant will be \$25,000.

Girard, O.—J. F. McFarlin, Village Clerk, states that Messrs. Fathergill of Youngstown and Ralston of Philadelphia have asked for a thirty-year franchise for the establishment of a water works plant.

Lancaster, O.—Daniel Hoffman, Superintendent of the water works, has recommended a number of very important improvements and additions to the water works plant; R. W. Pratt, Chief Engineer of the State Board of Health, has been here and will make recommendations to Council.

Lorain, O.—The Service Board has decided to extend the water main on the east side a distance of two miles; the main will be constructed of 12-inch pipe, the exact number of feet to be laid being 9,400; estimated cost will be \$16,000.

Newark, O.—Council recently passed an ordinance providing for an appropriation of \$85,000 for water works purposes, and directing the Board of Public Service to enter into a contract for the construction of a water works system.

Reading, O.—The Village Council will expend a large amount of money this summer in the extension of water mains and in repairing defective sidewalks and crossings.

Springfield, O.—This city will offer for sale June 9 \$20,000 coupon water works extension bonds, 4½ per cent. interest, payable semi-annually.

Steubenville, O.—The Board of Public Service has decided to put in a six-inch line from Slack to Garrett on Linden avenue.

Urbana, O.—Council is taking steps for the proposed new municipal water works system for the city. The question of a plant will be submitted to the voters.

Wooster, O.—The Board of Control of the Experiment Station will install a water supply system, to consist of a reservoir on the highlands, south of the farm, with a pipe

leading past the several groups of buildings; the station is in charge of the Ohio State University of Columbus.

Ardmore, Okla.—An election has been called June 24 by Mayor Dick to vote on issue of \$35,000 to extend the water works.

Avonmore, Pa.—Plans and estimates are being prepared by Robert H. Wilson, C.E., of Saltsburg, for a municipal water plant for the borough; an election will be held as soon as possible after the estimates are in to vote on a bond issue for construction of the plant.

McKeesport, Pa.—John Anderson is at the head of a project for the construction of a large reservoir near the mouth of Barren Run and supplying pure water to McKeesport and other towns in this section of the country; it is understood that Mr. Anderson has secured leases on practically all the land on the watershed and has interested Pittsburg and Greensburg parties in the project.

Saxton, Pa.—Proposals will be received for furnishing water to the borough for domestic, manufacturing and sanitary purposes; specifications, etc., furnished on application to J. S. Crum, Secretary, Borough Council.

Belton, S. C.—The city has voted \$12,500 bonds for the construction of a water works.—Address the Mayor.

Lancaster, S. C.—Bids will be received June 15 for the purchase of \$30,000 20-40 year, optional, 5 per cent. water works bonds.—John Crawford, Clerk, Board of Public Works.

Ennis, Tex.—Estimates are being prepared for water system.—T. H. Collier, Mayor.

Haskell, Tex.—A special election will shortly be held to vote on a proposition to issue bonds for installing a water works system.

Palestine, Tex.—The waterworks have been washed away as the result of a recent heavy storm; the city is practically without water and fire protection.

Temple, Tex.—The Attorney General has approved an issue of \$80,000 5 per cent water works bonds.

Clarksburg, W. Va.—Council is preparing to improve water system at a cost of \$18,000.—W. H. Cole, City Clerk.

Parkersburg, W. Va.—Engineers Chapin & Knowles, Frick Building, Pittsburg, Pa., have been commissioned to prepare plans for improvements and additions to the water works plant; work consists of filtering basin, sedimentation tank, pumps, etc.

Wheeling, W. Va.—The city has voted \$350,000 bonds for the improvement of the water works plant.

LIGHTING AND ELECTRICITY

Abbeville, Ala.—The city has voted \$12,000 electric light bonds.—P. A. McDaniel Mayor.

Columbus, Ind.—Improvements are contemplated by the Central Indiana Lighting Company during the summer, which include constructing a power plant, partially rebuilding the street car lines and extending the electric light service; the company also proposes to furnish steam heat to local consumers. New street cars will be purchased.—H. D. Larrabee, Manager.

Little Rock, Ark.—The Little Rock & Hot Springs Electric Railway Company is having plans prepared for a power house for its proposed road.—Richard H. Phillips, Security Building, St. Louis, Mo., Consulting Engineer; C. J. Kramer, 219 Main street, Little Rock, President.

Marion, Ind.—The proposition for lighting the streets made by the Marion Light and Heating Company will be taken up by Council.

Clinton, Ia.—A committee has been appointed to obtain prices and estimates for an electric light and ice plant for this town; I. L. Herman is interested.

Kiowa, Kan.—Plans have been prepared by Burns & McDonnell, Scarritt Building, Kansas City, Mo., for a municipal electric light plant, to cost \$12,000, combined with a water plant to cost \$40,000; plans and specifications are being prepared and bids will be received in about sixty days; the system will be operated by steam.

Moundridge, Kan.—Plans and specifications are being prepared for electric lighting and water works plant by Burns & McDonnell, Scarritt Building, Kansas City, Mo.

Russell, Kan.—An electric lighting and water works plant is to be constructed on plans prepared by Burns & McDonnell, Scarritt Building, Kansas City, Mo.; bonds are to be voted.

Solomon, Kan.—Burns & McDonnell, Scarritt Building, Kansas City, Mo., are preparing plans for electric lighting and water works plant.

Stockton, Kan.—Council proposes to purchase the electric light plant owned by a private company; improvements will be necessary.

Mayfield, Ky.—Fire destroyed the electric light and water plant, causing a loss of \$40,000.

Calumet, Mich.—The stockholders of the Calumet Gas Company propose to issue bids; extensive alterations and enlargements are contemplated at the company's plant.—Address Secretary.

Carrollton, Miss.—The Board of Aldermen has decided to rebuild the Carrollton Electric plant; the Carrollton Electric Company will dispose of all the fire-damaged machinery and install new machinery throughout.—B. F. Roach, Manager.

Poplarville, Miss.—About \$10,000 will be expended for improvements at the electric light plant and water works.—H. W. Thomas, Engineer; J. W. Ford, Mayor.

South Haven, Mich.—The citizens have voted \$10,000 bonds to pay the debt of the city lighting plant.—Address City Clerk.

Miles City, Mont.—Bids will be received June 25 for the purchase of \$10,000 6 per cent. electric light bonds.—J. E. Farnum, City Clerk.

Newark, N. J.—The Finance Committee of the Board of Freeholders has appropriated \$10,000 for installing a larger electric light and power plant in the penitentiary; the equipment will consist of 150-h.p. boiler, an 80-h.p. engine and generator; an appropriation of \$26,500 for installing an electric plant at the Court House was requested, but was deferred for action later.

Woodbury, N. J.—Plans are under consideration for the erection of a new municipal lighting plant here.—Address Councilman Pearson.

Newburgh, N. Y.—A revised petition from the Orange and Cronomer Lakes Power and Electric Company, which plans to produce electricity by water power in the town of Newburgh, praying for a franchise to place wires, poles, conduits, ducts, and other fixtures in the city streets, has been presented to Council and referred to its Street Committee.

Syracuse, N. Y.—The Board of Contract and Supply will probably advertise for bids for lighting the city streets and municipal buildings for a term of five years; Commissioner of Public Safety Harlow C. Clark has completed all arrangements with the Syracuse Lighting Company relative to its bid, it being agreed that the price for street arcs be \$68 per lamp per year and that 6 cents a kilowatt hour is to be charged for interior lights.

New Castle, Pa.—The new high school building will probably have a private electric lighting plant; a dynamo is to be installed, if present plans are carried out, of sufficient size to operate the heating and ventilating plant and to furnish the electric current for all lighting in and about the building; the double fan mechanical system of heating and ventilating will be used; the boiler house will be apart from the main building.

Yorkhaven, Pa.—Plans are contemplated by the Yorkhaven Water and Power Company for improvements to its plant, which will increase the output of the plant at Yorkhaven from 10,000 to 20,000 h.p. The plans call for construction of an addition to the power house 280 feet in length, ten General Electric generators and twenty water wheels, manufactured by the Poole Engineering and Machine Company, of Baltimore, Md. An electric crusher will be installed at the quatries. The company also proposes to extend its high-tension transmission lines to Lancaster and other cities in the lower part of Lancaster County, and to Spring Grove and Hanover.—E. F. Baker, General Manager.

Parksville, S. C.—The Twin City Power Company contemplates construction of a power plant on the Savannah River near Parksville.

Spartanburg, S. C.—The Electric Power and Manufacturing Company has assumed control of Spartanburg Gas and Electric Company and contemplates improvements to the plants.—F. H. Knox, Machesney Building, Pittsburg, Pa., Consulting Engineer.

Cashmere, Wash.—The Valley Power Company will furnish power to light the city and to pump water for \$40 per h.p. About two miles of pipe will be laid, 6,000 feet being 6-inch pipe and the balance 3 and 4 inch.

Wenatchee, Wash.—The Wenatchee Electric Company will erect a big power plant capable of producing 12,000 horsepower on the Icicle River, near Leavenworth; the preliminary surveys will soon be made, construction started and the plant in operation within a year.

Bruce, Wis.—Plans are being made for a water and electric light plant.—Oscar Clausen, Engineer, St. Paul, Minn.

Juneau, Wis.—The city will construct an electric plant, to be operated by gasoline engine. The city will purchase a 25-h.p. engine and a 300-gallon triplex pump. A power-house will be erected.—W. G. Kirchoffer, Madison, Engineer.

Jefferson, Wis.—The citizens have voted \$7,500 bonds for improving the electric light system.

Brandon, Man.—The International Lighting and Heating Company will erect three brick buildings for its gas plant.

Port Arthur, Ont., Can.—C. B. Smith, Consulting Engineer, Toronto, will prepare plans for the development of 10,000 h.p. at Dog Lake Falls and submit same to Council.

Preston, Ont., Can.—This town has signed with the Hydro-Electric Power Commission a contract for the supply of electric power from Niagara Falls. The town is to get 600 h.p. at \$23 per h.p. Of this quantity the electric light plant will take over 200 h.p.—Adam Beck, Chairman of Commission, Toronto.

Toronto, Ont., Can.—Council has authorized contract between the city and the Hydro-Electric Power Commission for 10,000 h.p. at \$18.10 per h.p. The city's share of the cost of the transmission line from Niagara Falls will be \$828,080.—R. T. Coady, City Clerk.

Construction work proposed by the government through the Hydro-Electric Power Commission, should the various municipalities sign contracts for power, will consist of about 290 miles of transmission line, erection of step-up transformer stations and switching stations, also step-down transformer stations for the various municipalities; the system will be 110,000 volts.—Adam Beck, Chairman of Commission.

Woodstock, Ont., Can.—The contract between the city and Hydro-Electric Power Commission has been adopted, and the Mayor and Clerk were authorized to sign it. The contract calls for the delivery of 1,200 h.p. by December, 1909, and it was estimated that the city may supply power for running the municipal water works and electric light departments, and will sell the remainder to local manufacturers.—Adam Beck, Chairman, Toronto.

Montreal, Que., Can.—The Saraguay Electric and Water Company has been formed for the purpose of taking over the property and holding of the Saraguay Electric Light and Power Company. A bill has passed the Quebec Legislature granting the new company extensive powers. The territory of the new company embraces the entire Island of Montreal, including the City of Montreal, the Island of Bizard and the Counties of Two Mountains, Laval and Terrebonne. The company is contemplating increasing its output during the present year. Its present plant is located in Cartierville. The company is capitalized at \$3,000,000, and the directors are W. M. Ramsay, H. Lamport, E. Champagne, Gaspard de Serres, 97 St. James street, and Charles Brandeis, all of Montreal.

FIRE EQUIPMENT

Los Angeles, Cal.—The question of the erection of two new engine houses at Main street and Vernon avenue and Seventh street and Santa Fe avenue, was discussed at a recent meeting of Council.

The residents of Warren avenue and Fifty-fifth street have petitioned Council for fire apparatus.—Address President of the Fire Board.

San Francisco, Cal.—A fire company has been organized in Glen Park subdivision.—E. J. Moriarty, Captain.

Willows, Cal.—The Town Trustees are considering the erection of a new City Hall and Fire Department building; special election is soon to be held to vote bonds.

Hartford, Conn.—It has been voted to erect a new fire house in the southwestern part of the city.

New London, Conn.—The Fire Committee is receiving bids for fire hose to be purchased to the amount of \$1,500; bids are to be received at the Mayor's office.

Stratford, Conn.—Council is considering a petition for a special meeting to vote on purchase of fire hose and new fire hydrants.

Willimantic, Conn.—The Fire Committee reported that the Fire Department is in need of 1,000 feet of fire hose, new rubber coats, boots, hose suspenders and nozzles; the Purchasing Committee in charge of purchase.

Joliet, Ill.—In his first annual report to Council Fire Marshal Frank Langdon recommends the purchase of a new steamer, a 75-foot aerial ladder, two double hose wagons and additional hose; a new fire house in the Fifth Ward is also recommended.

Decatur, Ind.—The erection of a new City Hall and new Fire Department building this summer is being considered.

Council Bluffs, Ia.—Council has decided to proceed at once with the drafting of plans for new central fire station at Main and Bryant streets and Washington avenue.—Address City Engineer Etnyre.

New Orleans, La.—The Board of Fire Commissioners, Herman Mieser, President, is receiving bids for two extra first-size steam fire engines and one aerial hook and ladder truck.

Fall River, Mass.—The Board of Fire Commissioners solicit sealed proposals for a new

Fire Department building at Robeson street and President avenue, according to plans on file at the office of Edward I. Marvel, architect, 57 North Main street.—Charles B. Woodman, Chairman of Board of Fire Commissioners.

Secretary D. F. Sullivan, of the Board of Fire Commissioners, has recommended the purchase of new fire truck equipment.

Highlands, Mass.—Alderman Leslie F. Keene is in favor of a new fire station to be erected at Melrose Highlands; cost estimated at \$15,000.

Lawrence, Mass.—Councilman Bee has offered a new amendment, providing for \$45,000 addition to loan for a new engine house to be erected in Ward 5 to take the place of the Morton street engine house.

Trenton, N. J.—Mayor Walter Madden has approved a supplement to ordinance No. 23 by Mr. Freudenmacher, authorizing the expenditure of \$3,300 for the purchase of a chemical auto fire engine for the Fire Department.

Detroit, Mich.—The Fire Commission will soon select sites for new fire stations in Fairview, Woodmere and in the vicinity of McKinley and Hancock avenues.

Mt. Clemens, Mich.—W. E. Moss & Co. of Detroit, have purchased \$15,000 Mt. Clemens engine house bonds, at a premium of \$26.25.

Minneapolis, Minn.—A. L. Dorr, Lumber Exchange, has prepared plans for new fire station at Third street and Sixth avenue; to be brick, two stories high and 54x100 feet, and cost about \$20,000.

Two Harbors, Minn.—Council proposes to improve the fire protection.

St. Louis, Mo.—The Board of Public Improvements will approve plans for reconstruction of No. 11 engine house at Bismarck and DeKalb streets, at a cost of \$20,000.

Camden, N. J.—The Fire Committee Council will soon select three sites for the erection of three new fire houses.

Long Branch, N. J.—At a special election by the residents of Bradley Beach recently it was decided to appropriate \$15,000 for a new borough hall and purchase of site and new fire apparatus.

Montclair, N. J.—A petition signed by 257 residents of Upper Montclair has been presented to Council asking for second hose company in that section.

Totowa, N. J.—The Fire Department is in favor of purchasing new fire apparatus.

Trenton, N. J.—Ordinance has been signed for expenditure of \$3,300 for new chemical auto fire engine for the Fire Department.

Flushing, N. Y.—Commissioner Nicholas Hayes, New York City Fire Department, while before the Board of Estimate and Apportionment asked for an appropriation of \$87,000 to extend the Fire Department to Flushing; new houses and new equipment are needed immediately.

Long Island City, N. Y.—The Fire Department officials of Manhattan recognize the need of better fire protection in this city and vicinity, and new fire houses and additional fire engines and other apparatus may be granted.—Address Deputy Chief Hoach, of the Forty-fifth Battalion.

Canton, O.—Bids are to be advertised for the purchase of \$1,600 worth of new fire hose; the question of new engine house and patrol station is also being discussed.

Findlay, O.—At recent meeting of Council Fire Chief Charles M. Arthur presented plans for new North Side engine house on site of old building; the new structure is to be two stories high, brick, 90x36 feet and modern in every detail.

Portsmouth, O.—Mayor Searcy is in favor of a new fire house; new building is to be erected and equipped at once and East End engine house is to be improved and enlarged.

Springfield, O.—John M. Winger has offered the Board of Public Safety property at Limestone street and Perrin avenue for new fire house, which it is proposed to erect somewhere in that section.—Address Chief Hunter of the Fire Department.

Steubenville, O.—Plans have been completed for building hose house on the North Hill suburb.—Hugo Pekruhn, Fire Chief.

Okmulgee, Okla.—Council will build City Hall and engine house.

Portland, Ore.—City Auditor Barbour has been directed to advertise for bids for a new automobile for the Fire Chief.

Dover, Pa.—Dover Union Fire Company, No. 1, has appointed a special committee to decide on new engine house; site is to be purchased and modern new structure erected.—Address Charles Swartz or Adam Gross.

Philadelphia, Pa.—The city has secured property at 239 South Sixth street for a new fire house, to be erected as soon as possible, to take the place of the building at Sixth and Sansom streets.—Address Fire Commissioner.

Reading, Pa.—Wm. A. Fink, 424 Franklin street, has completed plans for new engine house for the Friendship Fire Company of Phoenixville, to be three stories and 40x80 feet and brick construction.

Seattle, Wash.—Council is preparing to purchase three fire engines, a hook and ladder truck, three hose wagons, an automobile chemical wagon, a hook and ladder truck and a large quantity of fire hose.

The Salmon Bay Improvement Club is endeavoring to secure better fire protection for the Thirteenth Ward and has recommended the erection of a new fire engine house in that location.

Vollmer, Wash.—Work is to be commenced immediately on new City Hall and fire house and police station building.

PUBLIC BUILDINGS

Princeton, Ark.—The Court House here is to be abandoned and a new \$20,000 Court House is to be erected, probably at Fordyce, Gibbs and Sanders of Little Rock, Ark., are preparing plans.

Fresno, Cal.—The Board of Managers of the Fresno County Orphanage are considering the erection of a new and modern building.

Los Angeles, Cal.—Board of Education has permit for new school at 4401 Compton avenue, to be two stories high, brick, and cost \$32,000.

Contracts will probably soon be awarded for a large new addition proposed for county jail, to cost about \$6,000.

Oakland, Cal.—The Board of School Trustees of the Lockwood School District have voted to purchase site on the new boulevard between Baker and Hillside avenues as a site for new school.

Sacramento, Cal.—Rudolph Herold is to prepare plans for the new City Hall building, to be erected on I street and Ninth and Tenth streets, to be brick and fireproof and up to date in every detail.

District Attorney Wachhorst has been asked to prepare resolutions preliminary to the erection of a new Court House and jail on the site of the present buildings, Sixth and Seventh and H and I streets.

Norfolk, Conn.—Plans are about completed for new town building here, to be two stories high, brick and stone, and 45x53 feet in dimensions; to cost about \$25,000.

Albany, Ga.—A site is soon to be secured for new City Hall building.

Rossville, Ill.—Work has been commenced tearing down the old Court House preparatory to the erection of the new township building.—John Graham, Contractor.

Shawneetown, Ill.—Plans have been completed by Frank J. Schlotter of 1113½ U street, Evansville, Ind., for new school, to be brick and two stories high.

Peru, Ind.—Arrangements will soon be made for a new Court House.

Shelburn, Ind.—Property has been purchased as a site for a new school, to cost about \$16,000.—Address School Board.

Davenport, Ia.—Plans have been approved by Architect Studahur for new City Hall.—Address City Clerk.

Mason City, Ia.—The City Clerk has been authorized to advertise for bids for the construction of the proposed new City Hall, to be erected after plans by Architect Bogardus.

Lawrence, Kan.—The County Commissions have plans for new jail to be erected this summer, to be modern, of brick and stone construction, and cost \$25,000.

Augusta, Me.—Plans have been prepared for a new and handsome school, to be three stories high, brick, and modern.—Albert W. Brooks, Chairman, Board of Education.

Arlington, Mass.—Gay & Proctor, 21 Bromfield street, Boston, have prepared plans for large addition to Arlington Heights school on Locke street, to cost about \$50,000, and to be 84x75 feet in dimensions.

Chelsea, Mass.—The sum of \$58,000 has been appropriated for a new school to be erected on the site of the Frank B. Fay school.—Address the School Board.

Randolph, Mass.—A site on South Main street has been purchased by the School Board for new high school, plans for which have been prepared and accepted; John V. Beal, Edward Long and others are interested.

Battle Creek, Mich.—Sites are now being considered for a new City Hall.—Address the Mayor.

Detroit, Mich.—W. G. Malcomson, Moffat Building, has prepared plans for new additions to the Amox, Columbian and Lillibridge schools.

Painesdale, Mich.—Plans have been prepared by A. C. Eschweiler, Goldsmith Building, Milwaukee, Wis., for a new school, construction on which is to be commenced this summer; a \$100,000 appropriation has been made.

Gilbert, Minn.—Ray & Nystrom, Palladio Building, Duluth, have prepared plans for new school; cost, \$69,000.

Mt. Iron, Minn.—Jail is to be erected here; F. L. Young & Co. of Duluth, Minn., have prepared plans for large and modern new building.

Northfield, Minn.—The Board of Education

has decided to erect new central school to take place of present damaged building; cost estimated at \$70,000.

St. Louis, Mo.—Plans for a new municipal training school for nurses are now being discussed by the Board of Health; a new \$75,000 building is proposed.—Address Dr. Bond.

Asbury Park, N. J.—The people of Bradley Beach May 19 voted an appropriation of \$15,000 for new municipal hall and purchase of new fire apparatus.—Address John B. Rogers for further information.

Burlington, N. J.—Council has passed an ordinance providing \$17,000 for a new City Hall.

Moorestown, N. J.—The School Board has voted \$12,900 for public school purposes; a meeting has been called to secure plans for a new building to take the place of the present No. 7.

Point Pleasant, N. J.—The citizens recently voted \$30,000 bonds for a new high school.

Caledonia, N. Y.—A school is to be erected, probably, this summer; taxpayers are to vote June 12 on the issue of \$80,000 bonds.

Canandaigua, N. Y.—J. Webster Warner has prepared plans for new Court House which is to cost about \$120,000.—Address Mr. Warner, Granite Building, Rochester.

Buffalo, N. Y.—Plans have been prepared for rebuilding the old Franklin street police station, and bids for construction work are now being received.

White Plains, N. Y.—Governor Hughes has signed Mr. Wainwright's bill appropriating \$75,000 for the erection of an armory in White Plains.

Lincoln, Neb.—The question of erecting a new school to take the place of the Bancroft school is now being considered.—Address School Board.

Table Rock, Neb.—Council has purchased site for a new City Hall and Fire Department building.

Woodstock, Neb.—At a special meeting of the Board of Education it was voted to petition Council for appropriation of \$20,000 for new school.

Lexington, N. C.—W. P. Rose, of Rose & Weston, Greensboro, has prepared plans for new jail.

Cincinnati, O.—A site will probably be secured in the suburbs for new Refuge Home which it is proposed to build.—Address Member Dauner of the Service Board.

A special election will probably soon be called for new jail.

Hamilton, O.—A new school and auditorium is to be erected at Lickrun, to cost about \$60,000.

Madisonville, O. (Station, Cincinnati).—A new addition is to be erected to public school on Julia street on site recently purchased by the Board of Education.

Massillon, O.—Arrangements are being made to push work as rapidly as possible on new City Hall.—Address H. L. Leahy, G. A. List, members of Board of Public Service.

Sebring, O.—George W. Ashby, Medinah Building, Chicago, Ill., is preparing plans for a new school here for the Board of Education.

Youngstown, O.—Work is to be commenced as soon as possible and pushed forward on the new Mahoning County Court House.—Address Secretary Cooper of the Commission.

Guthrie, Okla.—The Senate has appropriated \$687,000 for new buildings to be erected at the various State schools; the A. M. College received \$222,000; State University, \$200,000, and Colored University at Langston, \$80,000.

Okmulgee, Okla.—Council recently started preliminaries for an election to vote on bonds for new City Hall building and structure for the Fire Department.

Allentown, Pa.—A new school is soon to be erected at Fifth and Cedar streets at a cost of about \$33,800; it is to be large and modern in every detail.

Belleville, Pa.—J. Herbert Hall, 1729 Oxford street, Philadelphia, has prepared plans for new addition to the Pennsylvania State College, to be brick and concrete and three stories high, and 140x73 feet.

Bridgeport, Pa.—Plans for the erection of a new school are being prepared; \$45,000 is to be expended. School Board of Brownsville, adjoining borough, is also planning new school.

Cambridge Springs, Pa.—Regarding the proposed new City Hall, Attorney Bolard has reported to Council that the Board should first get up the plans and specifications, approve them and then arrange for a trustee or owner to contract for the building, provide for deferred payments and then transfer title to the borough; the City Hall Committee was instructed to proceed with plans as rapidly as possible.

Mercer, Pa.—The County Commissioners of Mercer County have plans by Owsley & Boucherle of Youngstown, O., for a new Court House, to be three stories high, 92x180 feet in dimensions, and cost about \$200,000.

Oreland, Pa.—M. E. Schermerhorn, 430 Walnut street, Philadelphia, has prepared plans for new school for the school district of Upper Dublin township, to be one-story high, and colonial design.

Philadelphia, Pa.—An ordinance has been introduced in Council for an appropriation of \$300,000 for a new high school in West Philadelphia.—Address Select Councilman Patton.

Pittsburg, Pa.—Following out the course of procedure laid down by the State Supreme Court in a recent decision, the Central Board of Education has rejected one by one all the plans submitted in the competition for a new high school building; this opens the way for a new competition, and the entry of a certain Pittsburg architect who failed to get in the first one.

Reading, Pa.—The question of a new City Hall is being discussed; Mr. Stratton of the Seventh Ward is interested.

Woonsocket, R. I.—The Board of Aldermen has appropriated \$7,000 for new addition to the Fairmount school on Second avenue.

Anson, Tex.—An election will be held June 30 to vote on issue of \$100,000 Jones County Court House bonds.—Address County Auditor.

Lockhart, Tex.—The County Commissioners' Court has adopted plans for large new jail.

San Marcos, Tex.—An election will be held June 20 in Hays County to vote on issue of \$38,000 Court House bonds.—Address County Auditor.

Salt Lake City, Utah.—It is probable that city will contribute toward new isolation hospital in connection with St. Mark's.

Amelia, Va.—The School Board has purchased property as site for new high school.

Middletown, Va.—Legislature has authorized the establishment of a new agricultural school and \$15,000 has been appropriated for this purpose.—Address the Board of Education.

Pasco, Wash.—Arrangements are being made for the erection of a new Court House here.

Seattle, Wash.—The County Commissioners have authorized the advertising of bids for construction on a new addition to the King County Hospital, to cost \$50,000.

ELECTRIC RAILWAYS

Oakland, Cal.—A petition has been presented to the Supervisors of Alameda County by Joseph Naphtaly, 1286 O'Farrell street, San Francisco, asking for a franchise for the construction and operation of an electric railway to connect Alameda and Contra Costa Counties by means of the intercounty tunnel through the Berkeley Hills.

Casey, Ill.—Charleston and Casey Traction Company, principal office, Casey; capital, \$2,500; road to be constructed from Charleston, Ill., to Casey, Ill.; H. R. Patton, Charleston, Ill.; William Stull, Charleston, Ill.; R. F. D. No. 1; S. S. Yanaway, Casey, Ill., and others, incorporators.

Danville, Ill.—D. C. Johnson, Clinton, President of the Wabash Traction Company, states that construction of this railway at an early date is assured. It will run from Danville, Ill., to Terre Haute, Ind., skirting the west bank of the Wabash River and passing through Clinton, Ind., connecting a chain of towns from Terre Haute to Danville, a distance of 54 miles. Surveys have not been made or right-of-way secured yet. The officers of the company are as follows: D. C. Johnston, Clinton, President; W. S. Lewis, Clinton, Vice-President; B. S. Aikman, Newport, Secretary, and H. B. Davis, Newport, Treasurer.

Wood River, Ill.—The Wood River, East Alton and Bunker Hill Traction Company has been incorporated in Illinois to build an electric railway between Wood River, East Alton, Bethalto, Moro, Bunker Hill, Gillespie and Litchfield, Ill., about sixty miles. The overhead trolley system will be used; power for lighting and other purposes will be furnished to cities and towns along the line. Power station and repair shops probably will be located at Bethalto, Ill. Practically all right-of-way and franchises through several towns have been secured. Capital stock, \$250,000. Incorporators: J. T. W. Rudesill, President; S. B. Knepper, Secretary; R. M. Smith, Treasurer, all of East St. Louis, Ill.; and D. R. Maxey, Vice-President, Wood River.

Excelsior Springs, Mo.—Henry J. Arnold of Denver, Col., proposes to build an electric line in Excelsior Springs.

Oakland, Md.—The Youghiogheny Light and Power Company, Oakland, will build a standard gauge electric railroad to Swallow Falls and then a branch about thirty miles long to Uniontown, Pa.; also a lateral branch from this to Kingwood, about twelve miles; also another branch fourteen miles long, to connect with the railroad of the Jennings Lumber and Coal Company. A. C. Sturgiss is President; Truman West, Vice-President; P. A. Chisholm, Second Vice-

President; James D. Hamill, Treasurer; Bowie Johnson, Secretary; H. P. Tasker, General Manager.

Minneapolis, Minn.—The Twin Cities and Lake Superior Street Railway Company has been incorporated in Wisconsin to build an electric railway from Minneapolis and St. Paul, Minn., to Superior, Wis., 130 miles. The company originally was incorporated under the laws of the State of Maine for the construction of this line under the name of the Twin City and Lake Superior Railway. The Wisconsin articles provide for a road from Sunrise to Peet and from Foxboro to Superior. Capital stock, \$7,000,000. Incorporators: E. L. Peet, Gransburg, Wis.; G. B. Haugan, Duluth, Minn.; F. R. Duxberry, St. Paul, Minn.; E. Lewis, Storm Lake, Minn.; Edward Henry, Minneapolis.

Ashtabula, O.—The Ashtabula Electric Street Railway Company will construct its proposed road from Ashtabula to Ashtabula Harbor, 5½ miles, this year. The company proposes to use the overhead trolley system and to operate five cars. No contracts have been awarded. C. E. Wallin is President; E. P. Broden, Vice-President; J. V. Paulson, Secretary; O. Arvidson, Treasurer, and C. F. Bretherton, General Manager.

New Philadelphia, O.—The Columbus, Canton and Eastern Transit Company has been incorporated in Ohio to construct an electric railway through Canal Dover, Coshocton, New Philadelphia, Newcomerstown and Newark, Ohio. Preliminary surveys have been made. Construction probably will be started as soon as financial arrangements are completed. Headquarters, New Philadelphia. Capital stock, \$200,000. Incorporators: W. J. Wise, W. W. Snyder, Clyde J. Knisely, Frank J. G. Kuenzli, F. O. Richards, A. W. Reiser and E. S. Rhodes.

Upper Sandusky, O.—C. B. Hare is interested in the proposed electric road to be built from Upper Sandusky to Marion.

Manor, Pa.—The Manor Valley Electric Railway Company has applied for a charter. Company proposes to build from Manor to Export, seven miles. Surveys are made. Right-of-way and capital for building the line are partly secured.—H. A. Lauffer, President.

Philadelphia, Pa.—John L. Clawson, 45 South Second street, Philadelphia, who is receiver of the Atlantic City and Suburban Traction Company of Pleasantville, N. J., is interested in plan to build a railway to Atlantic City if that city will grant him franchises for trolley lines on Pacific and Arctic avenues.

York, Pa.—J. H. Keller, Secretary, Shrewsbury, advises us that right-of-way is being secured by the Shrewsbury and York Traction Company, which proposes to build an electric railway between Turnpike and York, fourteen miles. Survey has been made.—D. B. Goodling, Loganville, Pa., President; S. M. Manifold, York, Chief Engineer.

BRIDGES

Jacksonville, Fla.—The County Commissioners have under consideration the erection of a bridge over Six-Miles Creek on the plank road.—Address County Engineer Brainerd.

Forest Park, Ill.—Engineers Westcott & Ronneberg, room 1107, 188 Madison street, Chicago, are preparing plans for a bridge over the Des Plaines River at Forest Park for the Forest Park Cemetery Company; to be 124 feet long, 11 feet wide; steel, with concrete abutments.

Streator, Ill.—Mayor Davis recommends the construction of a new bridge across the Vermillion River.

Indianapolis, Ind.—The County Commissioners have decided to build a bridge over Big Eagle Creek in West Washington street, and to join the Big Four Railroad Company in building a subway under the railroad tracks west of the bridge; the cost of the bridge will be about \$67,000; the subway will cost about \$10,000, of which the county's share will be about \$3,000.—Address Marion County Auditor.

Winchester, Ind.—The County Council is considering a petition for an appropriation to build a wide bridge, similar to the ones on the downtown streets, across Salt Creek, at the south end of Main street, near Fountain Park Cemetery.—Address County Auditor.

South Bend, Ind.—A. J. Hammond, City Engineer, is preparing plans for the construction of an ornamental bridge at Leeper Park.

Lawrence, Kan.—The Douglas County Commissioners have authorized advertising for bids for the construction of four bridges, three across the Wakarusa River and one across Little Wakarusa Creek; two are in Clinton township and two in Eudora township.—Address County Auditor.

Topeka, Kan.—The city contemplates having a concrete bridge constructed across Shunganunga Creek at Lincoln street; estimated cost, about \$4,000.

Brookhaven, Miss.—The Board of Supervisors

ors of Lincoln County has adopted plans and specifications for additional steel span to bridge spanning Homochitto River, and will receive bids in June.—Address Lincoln County Supervisor.

Springfield, Mo.—Draftsman Essex of the city engineering force will draw plans for the bridges across Jordan at Boonville and Main streets; the bridge as proposed for Main street, and as the new plans are drawn, will be of concrete floor, with 18-inch I-beams, and the bridge at Boonville street will be a reinforced concrete arch, spanning the creek.—Address City Engineer.

Gering, Neb.—The citizens of Scott County will vote on issue of bonds to build a county bridge across the North Platte River.—Address County Auditor.

Santa Fe, N. M.—The County of Bernalillo has been authorized to issue \$100,000 bonds for constructing steel bridges across the Rio Grande, near Albuquerque; the measure was introduced by Delegate W. H. Andrews.

Johnstown, Pa.—Councils have referred to the Highways Committee a communication from City Engineer M. Lee Masterton, setting forth that the bridges throughout the city, especially those at Franklin street, Maple avenue, and McConaughy street, and the Haynes street foot bridge, are badly in need of repairs; the cables on the Haynes street foot bridge, Mr. Masterton declared are worn to 70 per cent. of their original thickness, and a rush of traffic on that structure might result disastrously.

Knoxville, Tenn.—Council heard the report of City Engineer Newton on the investigation of the Asylum avenue viaduct; the City Engineer reported the bridge in an unsafe condition and recommended that it be replaced as speedily as possible and, in the meantime, he would keep the closest watch over it; he recommended that all heavy vehicles be barred from using it.

Austin, Tex.—The County Commissioners have issued a proclamation for a \$500,000 bond issue election, June 29; a portion of the issue will be used for refunding purposes, and the larger part for a new bridge across the Colorado River.—Address County Auditor.

Aransas Pass, Tex.—Authority has been given by Congress to the Aransas Harbor Terminal Railway to build a bridge across Cummings Channel.

Clarksburg, W. Va.—Several bridges in Harrison County have been destroyed by flood; estimated loss, \$40,000.—Address Harrison County Auditor.

Wheeling, W. Va.—City has voted \$25,000 bonds for Market street bridge.—C. B. Cook, City Engineer.

Shell Lake, Wis.—The Washburn County Board has been petitioned for aid in building several county bridges.—H. M. Laurens, Chairman, Shell Lake.

MISCELLANEOUS

San Diego, Cal.—A site will soon be selected for new garbage disposal plant, which it is planned to erect.

Sacramento, Cal.—The State Board of Examiners has put in bids for \$125,000 worth of bonds, representing various public undertakings. It has bid for \$80,000 worth of Oroville levee bonds at 5 per cent. and its proposal will be most likely accepted. It has offered to take over Fairfield, Solano County, sewer bonds for \$20,000, and also \$25,000 worth of bonds of Stege School District, Contra Costa.

San Francisco, Cal.—The Public Utilities Committee of the Board of Supervisors is getting in shape the specifications for bidders who wish to figure on printing the new bonds, \$18,000,000, for the city. It has been decided that the bids should be received on June 15, which is the earliest date possible, owing to legal formalities which must be complied with.

New Britain, Conn.—The Supplies Committee has recommended awarding the contract for furnishing drinking fountains to the New Britain Ice Corporation at \$45 per drinking fountain.

The Supplies Committee also asked for an order to look into the advisability of erecting a third drinking fountain at the north end of Central Park.

Fitzgerald, Ga.—McRoberts & McCoy of Chicago, Ill., have purchased \$20,000 Fitzgerald municipal bonds for \$20,414.20.

Bloomington, Ill.—A resolution is soon to be introduced in Council asking for new crematory.

Milford, Ill.—An election will be held to decide the question of issuing \$8,000 park bonds.—Address Town Clerk.

Waukegan, Ill.—Farson & Son of Chicago have purchased \$14,500 Foss Park bonds, issued by Waukegan Council at a premium of \$623.

Creston, Ia.—The Burlington Company's large garbage disposal plant was recently destroyed; arrangements will be made for rebuilding at once on a larger scale.

Burlington, Kan.—Plans are under way

for establishing a new park in Burlington.

Boston, Mass.—The city is preparing to issue \$4,000,000 municipal bonds.—Address City Treasurer Slattery.

Bay City, Mich.—City Recorder Grant has signed up the entire issue of \$200,000 park bonds and has turned them over to City Treasurer Corliss, who now has \$150,000 of them on hand. The \$50,000 advanced by the Lumberman's State Bank represented that amount in bonds taken by them as a first installment. When the Park Commission needs more money the bank will take up more bonds, supplying the equivalent in cash. The city is a gainer by this on interest. It is not expected that the Park Commission will need more than \$50,000 for some time to come, as there is a vast deal of preliminary work to go through.—A. E. Bousfield, Chairman Park Commission.

Minneapolis, Minn.—The citizens of Camden place recently held a mass meeting to discuss a new park for that vicinity; it is estimated that the cost would be \$20,000.

St. Paul, Minn.—A Boston bond house has taken \$230,000 of the recent city issue of sewer, school and refunding bonds and the remaining \$20,000 was sold to local investors; no bid was received for the bonds at the recent sale, but a number of inquiries have been addressed to Controller Betz in regard to the bonds. The bonds draw 4 per cent. and run for thirty years. They were sold at par plus accrued interest.

Bayonne, N. J.—W. H. Richardson, 250 Union street, Jersey City, can be addressed regarding the proposed new county park in Greenville and this city.

Jersey City, N. J.—The Board of Finance will receive bids June 5, 3 p. m. for \$1,000,000 4½ per cent. twenty-year bonds.

Newark, N. J.—At recent session of the Legislature law permitting \$200,000 additional bonds for park purposes was granted; Weequahic Park is to be improved.

Vailsburg, N. J.—Plans are under way for a new park to be laid out in this section.

New York City, N. Y.—The creation of a new park alongside Riverside drive, between One Hundred and Fifty-fifth street and Dyckman streets, involving an expenditure of \$7,560,000, has been authorized by the Board of Estimate and Apportionment.

Ashtabula, O.—A new municipal park along the Ashtabula River on both sides of the lake shore is now being discussed.—H. D. Cook, Mayor.

Cincinnati, O.—A petition of the property owners on Lower River road for the discontinuance of the garbage reduction plant in that section has been received by the Council Health Committee.

Columbus, O.—In spite of the failure of the Board of Public Service to induce contractors to bid for the contract of erecting a garbage reduction plant for Columbus on a recent advertisement, Director Fred Weadon is confident the garbage of Columbus will soon be treated at a reduction plant which will convert it into useful fertilizer and tankage of considerable value, instead of being buried on a city farm as it has been for some years; the Board is now having its engineers redraft the specifications, which the contractors and builders declared were prohibitive in some features; he said they proposed to see that the city is protected in every way possible, but that some legal objections to the specifications as offered the bidders before, will be removed when the Board readvertises in the near future.

Salem, O.—Plans are now under way for new park to be known as the Centennial Park and be located on McKinley avenue.—Address the Service Board.

Tulsa, Okla.—Council has taken steps towards establishing a new system of city parks.

Erie, Pa.—The Conduit Committee of Council has directed estimates to be prepared for extending conduits.—Address Secretary of the Committee.

Johnstown, Pa.—Common Council has voted 12 to 7 against the issuance of \$35,000 bonds for the improvement of the waterways of the Conemaugh and Stonycreek from the Point to the Stone Bridge.

Memphis, Tenn.—The question of a new garbage crematory, to cost about \$45,000, is being discussed.

Park City, Tenn.—The citizens have voted \$130,000 bonds for fire, sewer and street purposes.

Brunner, Tex.—The citizens are interested in a new public park.

Tacoma, Wash.—Plans have been completed for new brick and concrete crematory, to be erected on Eleventh street, west of the rink; John B. Kin and others are interested in the new company.

Sumner, Wash.—E. L. Roberts, Superintendent of Parks of Tacoma, will address Chamber of Commerce here regarding plans which are under way for new park.

Grafton, W. Va.—A site has been purchased at the mouth of Short Creek, near the Wabash right-of-way, for a new and modern crematory.

BIDS RECEIVED

Los Angeles, Cal.—The Board of Public Works has awarded contract for the construction of a sewer in Tenth street, Jasmine street, etc., to M. L. Hostetter, at \$25,975, for sewer complete.—Horace B. Ferris, Secretary.

San Francisco, Cal.—The Board of Public Works awarded the contract to Fann & Hood for building the temporary Girls' High School, at \$24,462.

Willow, Cal.—The following bids were received by the Boards of Supervisors of Glenn and Butte Counties for the construction of the Granelli bridge: Hyde, Harjes & Co., \$154,300; Burrell Bridge Company, \$156,990; San Francisco Bridge Company, \$159,320; Pacific Construction Company, \$150,890; Healey, Tibbitts & Co., \$157,650; Cotton Bros., \$149,880, awarded contract.

Hartford, Conn.—The State Highway Commissioner has awarded to Frank Arrigoni & Bro., Durham, the following contracts for constructing roads: Guilford, 2,900 feet telford, \$5,152; Branford, 8,700 feet macadam-telford, \$17,155. Other bidders were: F. T. Ley & Co., Springfield, Mass., \$6,380 and \$21,067; Pierson Engineering & Construction Company, Bristol, \$5,550 and \$17,477; the B. D. Pierce, Jr., Company, Bridgeport, \$7,192 and \$21,557; A. Brazos & Sons, Middletown, \$5,365 and \$18,099.

The Board of Contract and Supply opened the following bids for resetting curb on Asylum and intersecting streets, the figures given being per linear foot: Billing Slidewalk and Coal Company, Hartford, \$2.65 and \$2.90 for Glastonbury and Monson granite respectively; R. Silvestro & Co., \$2.73 and \$2.84; Alexander Watson, \$2.84 and \$3; A. S. Freeborg, as per sample of stone submitted, \$2.80.

Lisbon (Jewett City postoffice), Conn.—The contract for constructing 4,500 linear feet of gravel road has been awarded to the T. H. Gill Company, Winter Hill, Boston, Mass., at \$4,725. Other bidders were: William B. Wilcox, Mystic, Conn., \$4,995; A. Vito, Thompson, Conn., \$5,175.

New Haven, Conn.—The Permanent Paving Commission opened bids for laying permanent pavements on seven streets. The firms that bid on all of the contracts were the C. W. Blakeslee Company, Frank Brazos Company, and the B. D. Pierce, Jr., Company, of Bridgeport. Upson & Grannis bid on some of the contracts. Before the bids were opened the committee decided that it was better to use sand filler, and for this the committee will allow 8 cents a square yard above the amount at which the contracts were awarded. All the bidders agreed. The successful bidders and their bids, which were the lowest offered, are as follows: C. W. Blakeslee Company, White street, from Columbus to Congress avenues. To be paved with macadam and Belgian block gutters, \$1,392; St. Ronan street, from Edwards to Highland streets, macadam pavement and concrete gutters, \$8,851.20; Winthrop avenue, from George to Oak streets, macadam pavement with concrete gutters, \$5,295.90. Frank Brazos: Webster street, from Winchester avenue to Goffe street, macadam pavement, with Belgian block gutters, \$4,005.35; Newhall street, from Division to Ivy streets, macadam pavement and Belgian block gutters, \$2,645.50. Division street, from Winchester avenue to Dixwell avenue, macadam pavement with Belgian block gutters, \$3,685. Rosette street, from Howard avenue to Morris street, macadam pavement, with Belgian block gutters, \$2,892.

Norfolk, Conn.—The contract for constructing 4,423 linear feet of graded road in the town has been awarded to the Board of Selectmen at \$1.81 per linear foot; the contract calls for four 24-inch and three 20-inch tile culverts; other bidders were: A. Vito, Thompson, \$2.48; A. Brazos & Sons, Middletown, \$2.49; the B. D. Pierce, Jr., Company, Bridgeport, \$2.85.

Norwalk, Conn.—The contract for installing the proposed electric lighting system has been awarded by the Lighting Committee to W. M. Sheehan & Co. for \$5,150.

Atlanta, Ga.—George B. Hinman, Austell Building, has contract to build a \$28,000 ferro-concrete bridge across Peachtree Creek.—A. F. Walker, Architect; Solomon Norcross Company, Consulting Engineer.

Thomasville, Ga.—Gerde & Co. of Atlanta were awarded contract for new County Court House; cost, \$50,000.—M. H. Sandwich, Clerk County Court.

Collinsville, Ill.—The contract for the extension of the water works has been awarded by Council to T. C. Brooks & Sons, of Jackson, Mich., at \$13,620.—A. C. Powell, City Engineer.

Quincy, Ill.—Ebert & Shannahan have been awarded contract for curbing, excavation, reopening and paving with brick Kentucky street, from Fifth street to Sixth avenue, also from 177 feet east of Sixth avenue to Twelfth street, for \$18,940, and Tenth street,

from Broadway to Oak street, for \$5,960, and to Elff & Soebbing, Oak street, from Ninth to Tenth streets, for \$2,234.58.—Fred. L. Hancock, Public Engineer.

Evansville, Ind.—Jacob Bippus & Son, city, have been awarded the contract for the erection of the Children's Outing Farm dormitory, after plans by Architect E. F. Schlottner.

Fort Wayne, Ind.—The following bids were received by the County Commissioners for constructing a 200-foot span bridge over the St. Mary's River at Clinton street: On reinforced concrete construction, including abutments: National Bridge Company, Indianapolis, Ind., \$26,750; Central States Bridge Company, \$27,500; on steel superstructure: Wynkoop & McGormerly Company, Toledo, O., \$22,471; Penn Bridge Company, Beaver Falls, Pa., \$24,000; Central States Bridge Company, \$19,445; Elkhart Bridge Co., \$19,477; Lafayette Engineering Company, \$18,543; Attica Bridge Company, \$19,854; Indiana Bridge Company, \$18,788.

Indianapolis, Ind.—The Julius Keller Construction Company was low bidder for constructing Morris street sewer for West Indianapolis; the following were the bids submitted: Julius Keller Construction Company, \$2.93 a linear foot; William Yates & Co., \$2.96; Marion County Construction Company, \$3.40; John Jenkins, \$3.435, and Pease & Buzzatt, \$3.71.—Blaine H. Miller, City Engineer.

Richmond, Ind.—The Paris Mercantile Bridge and Concrete Tile Company, Paris, Ill., has been awarded contract for furnishing the concrete tile for the sanitary sewer, at about \$30,000.

Terre Haute, Ind.—Gottschalk Bros. submitted the lowest of three bids for the construction of a sewer in Twenty-fourth street at the following prices: Section A, 18-inch pipe, 72 cents; Section B, 15-inch pipe, 62 cents; Section C, 12-inch pipe, 52 cents; Ys, 12x6 inches, \$1.03; 15x6 inches, \$1.40; 18x6 inches, \$1.65; catchbasins, \$28; curb inlet, \$19; manhole, \$28; the other bidders were: W. J. Erler and O'Leary & McBride.

Council Bluffs, Ia.—E. A. Wickham, city, submitted the only bid for the construction of the municipal water works plant, at \$631,535.

Louisville, Ky.—The contract for Section A of the southern outfall sewer has been executed by the Board of Sewer Commissioners. This section is known as the outlet section, as it runs from the river to the beginning of Section B. Some little time ago the contract for the work of digging this section was awarded to the Ferro-Concrete Construction Company, of Cincinnati, O. The length of the section is about 2,000 feet and the bid was in the neighborhood of \$90,000. The contractors expect to begin active work at once, and the estimated time of construction is one year.

Tuesday the digging of Section C was begun by the American Engineering and Concrete Construction Company of Chicago. Section B has been under the spade and shovel for more than a month. With the beginning of the work on Section A all of the sewer for which plans and specifications have been drawn preparatory to asking for bids will be in course of construction. The engineers are now at work making surveys and drawing plans for the two branches of the sewer, which will run from the extreme end of Section C to South Louisville and the extremity of Floyd street. Section C is now being dug at Thirty-second street and Woodlawn avenue.

Augusta, Me.—Schedule of proposals received for furnishing material and installing a water system at the State Muster Field, May 19, 1908: Charles J. Jager Company, Boston, gasoline engine and elevated tank (a) \$2,337; electric motor and elevated tank (b), \$2,450; gasoline engine and pneumatic tank (c) \$2,575; electric motor and pneumatic tank (d), \$2,687. A. D. Ward, Augusta, (a) \$3,500, (b) \$3,300; (c) \$3,450; (d) \$3,300; C. N. Taylor, Wellesley, Mass., (a) \$2,400, (b) \$2,350, (c) \$2,600, (d) \$2,550; Steward H. & P. Company, Skowhegan, (a) \$2,108, (b) \$2,048, (c) \$2,168, (d) \$2,100 (accepted); Lunt-Moss Company, Boston, (a) \$2,164, (b) \$2,140, (c) \$2,550.80, (d) \$2,516.80.

Baltimore, Md.—Berghaus & Moffitt, 200 Pine street, Harrisburg, Pa., were low bidders for constructing 22,686 square yards, 6 to 8-inch macadam pavement on natural soil, 6-inch to cost 74 cents per square yard and 8-inch 95 cents; 14,000 cubic yards excavation, 49 cents; total, \$39,086.65; McDowell & Brown bid \$41,988.90; Geo. Killeen & Co., \$45,762.05; Roland Park Company, \$41,217.83; Klipp & Bofst, \$41,356.85, and C. C. Magruder, \$41,153.45; the contract will be awarded later.—W. W. Crosby, Chief Engineer.

Salisbury, Md.—The following are the low bids received by the Mayor and Council for grading, paving and draining North Division street: For 16,000 square yards of bitulithic pavement, F. E. Schneider & Co., Law Building, Baltimore, total \$62,514; for 16,000 square

yards brick pavement, B. F. Sweeten & Son, 111 Delaware avenue, Camden, N. J., with Portland concrete filler, total \$56,599; with Pioneer asphalt filler, total \$59,319; with sand filler, total \$56,119.—T. Chalkley Hatton is Consulting Engineer, Wilmington, Del.; J. T. Parsons, Clerk Council.

Middleboro, Mass.—Contract for new Corthell school was recently awarded to Clarence A. Randall for \$10,500.

Benton Harbor, Mich.—W. H. Roney, Chicago, Ill., has been awarded contract for constructing bridge over St. Joseph River at Benton Harbor and St. Joseph, consisting of one swing span, 200 feet long, two approach spans, 56 feet long; roadway 32 feet, walks 7 feet, at \$57,000, exclusive of electric equipment and paving of creosoted timber, etc., for which \$4,000 is allowed.—Meagher & Meagher, Bay City, Mich., submitted bid at \$59,310, while other bidders were: Scherzer Rolling Lift Bridge Company, Chicago, Ill.; Central States Bridge Company, Indianapolis, Ind.; Penn Bridge Company, Beaver Falls, Pa.; Schilling Bros., Chicago, Ill.—J. W. Pearl, Engineer.

Grand Rapids, Mich.—The following contracts have been awarded: Improvement of LaGrave street to Kloote & Vander Veen, \$3,830. Estimate, \$3,830.

Improvement of Cherry alley to L. H. Kanitz, \$896.30. Estimate, \$1,200.

Sewer in LaGrave street to Peter DeWitt, \$310. Estimate, \$366.

Sewer in Eleventh street to Richard Pickett, \$4,348. Estimate, \$4,233.

The following approximate estimates were submitted by the City Engineer:

Grading and macadamizing of North College avenue, from East Fulton street to East Bridge street, \$16,558.

Grading and graveling of North College avenue, from East Fulton street to East Bridge street, \$10,493.

Grading and macadamizing from East Fulton street to 450 feet south of Fountain street and grading and paving with creosote wood block on concrete from this point to East Bridge street of North College avenue, \$22,096.

The contract for supplying screened gravel to highway district No. 6, which includes the whole West Side, was awarded to F. W. Kuennan at \$1.25 per cubic yard. The Gravel City Stone & Gravel Company was awarded the contract for supplying the other five districts, its bids ranging from \$1.40 to \$1.70 per cubic yard.

Pontiac, Mich.—Stone & Green, Chicago, Ill., have been awarded contract for construction of the Second Ward trunk sewer, about 7,440 feet long, and 24 to 28 feet deep at deepest points, at \$12,040.

Saginaw, Mich.—The Water Board awarded the contract to T. H. Inglehart for laying the water main in Washington, Atwater and Franklin streets, from Holland to Potter streets, at \$39,789.

Columbus, Mont.—The contract for constructing a bridge over the Yellowstone River at Columbus has been awarded to the Security Bridge Company of Minneapolis, Minn., for \$19,750.

Deshler, Neb.—George V. Ballard of Lincoln has been awarded contract for constructing water works at \$13,985.—W. E. Philby, Village Clerk.

Claremont, N. H.—Douglas & Varnum, Woodsville, have been awarded the contract for construction of substructure of bridge across the Connecticut River, between West Claremont and Weathersfield, at \$8,000.

The United Construction Company, 467 Broadway, Albany, N. Y., secured the contract for the superstructure at \$21,804.

Atlantic City, N. J.—The Water Department has awarded the contract for the erection of the pumping station at Absecon to Thompson & Stiles, at \$7,834.

Jersey City, N. J.—The Street and Water Board has awarded John Nolan contract for the improvement of Communipaw avenue, from Nunda to West Side avenues; price, 89 per cent. of estimated cost; also for the improvement of Wilkinson avenue, from Bergen to Jackson avenues; price, 89 per cent.

Trenton, N. J.—Council's Sanitary Committee has viewed the property in which the proposed Hermitage avenue drain is to be laid and negotiations have been started with the property owners for the right of way. The committee has decided to recommend that Gibbs & Morgan be awarded the contract for the Woodland street sewer and Thomas J. McGovern for the Prospect Short and High street and Pennington avenue sewer, and also for the house connections in South Clinton avenue, between Greenwood avenue and Elmer street.

Albany, N. Y.—The Board of Contract and Supply awarded contract for paving McCarty avenue to M. F. Dollard of Albany at \$19,761.80.

Brooklyn, N. Y.—The lowest bid opened by John H. O'Brien, Commissioner of Water Supply, Gas and Electricity, New York, for furnishing, delivering and laying water mains

along Trotting Course lane and Myrtle avenue to Cypress avenue, was that of the R. W. Carter Company at the following prices: For 2,800 tons of straight pipe, \$29; 35 tons cast-iron specials, \$55; 10 tons cast-iron for stopcock boxes, \$55; 17,000 feet of 30-inch pipe, 56 cents; 100 feet of 6-inch pipe, 50 cents; 7,500 square yards of block pavement, 30 cents; 1,200 square yards of macadam pavement, 25 cents; 30 cubic yards of brick masonry, \$10; 30 cubic yards of concrete, \$6; 2,000 feet lumber, 1 cent; 5,000 pounds steel, 5 cents; 500 cubic yards extra excavation, 1 cent; 25 cubic yards of rock excavation, 1 cent; one 30-inch connection, \$925; stopcocks, etc.; total, \$99,162. Other bids were: J. J. McCarthy, \$104,226; Murphy Company, \$104,567; Clinton Beckwith, \$109,570; J. Kelly, \$110,191; Donegan & Redmond, \$110,707; H. E. Fox, \$112,910; J. Z. Carey Company, \$114,522; Daly & McBean, \$118,619; Douglas & Hand, \$120,510; Hanover Construction Company, \$121,536; H. J. Mullen, \$121,958; Donlon Construction Company, \$122,734; J. H. Holmes, \$125,736; Sheehan Construction Company, \$143,332; Pease Bros., \$143,714, and Siegretto & Mennio Company, \$150,838.

Hudson, N. Y.—Bids were received by Council for lighting the streets and the City Hall building for a term of either three or five years, commencing September 15, 1908; the contract has been let to the Albany & Hudson Railroad Company, Stuyvesant, N. Y., for a period of five years at a yearly rate of \$81.75 for arc and \$22 for incandescent lamps. There will be 117 arc lamps of 2,000 c.-p. and 15 incandescent lamps of 22 c.-p.—William Wortman, City Clerk.

New York, N. Y.—The following are the bids opened by John F. Ahearn, President Borough of Manhattan, for furnishing all the labor and material required for reconstruction of outlet sewers and appurtenances in Twenty-eighth and Twenty-ninth streets, between East River and First avenue, and in First avenue, between Twenty-eighth and Twenty-ninth streets: M. Marrone, 414 East One Hundred and Sixteenth street, \$33,319; Bart Dunn, 444 East Sixty-eighth street, \$24,495; Smith & Fitzgeralds, \$35,343; New York Sewer Construction Company, 438 East Ninety-first street, \$38,036; Joseph Moore, \$28,697.

The following bids were received for furnishing all the labor and material required for reconstruction of outlet sewer and appurtenances under Pier (new) 15, East River, and in South street, between Maiden lane and Burling Slip: Bart Dunn, 444 East Sixty-eighth street, \$13,927; New York Sewer Construction Company, 438 East Ninety-first street, \$12,622; J. P. Moore, \$10,169; Smith & Fitzgeralds, \$16,094.

The Public Service Commission has decided to award contract for the construction of the first section of the Fourth avenue subway in Brooklyn to James P. Graham, the low bidder, who appealed to the Commission to be allowed to withdraw his bid, claiming that he had made his estimates too low; he must now either perform the work or forfeit his bond.

The following bids were received by C. B. J. Snyder, Superintendent of Schools, Department of Education, for installing electric equipment in new Public School No. 100, on One Hundred and Thirty-eighth and One Hundred and Thirty-ninth streets, about 100 feet west of Fifth avenue, Borough of Manhattan: L. K. Comstock Company, 114 Liberty street, \$18,000; T. Frederick Jackson (Inc.), 592 Columbus avenue, \$16,600; Commercial Construction Company, 114 East Twenty-eighth street, \$18,315; Feet & Powers, 45 East Thirty-fourth street, \$17,639; Griffin & Co., 116 Nassau street, \$17,327; Ries & O'Donovan, 1123 Broadway, \$16,920; Cowden & DeYoung, 237 Broadway, \$18,490; E. J. Duggan, 1133 Broadway, \$21,952; Brown & McClure, 35 West Twenty-first street, \$18,110.

Bids were received as follows by the Department of Parks for furnishing all the labor and materials for completely erecting and constructing the concrete walls, piers and footing and reinforced concrete posts, surmounted by an electrically-welded iron fence, on the eastern extension of Bronx Park, New York: F. P. Reynolds, \$3.98 per foot; Haggerty Contracting Company, 21 Park Row, \$2.90; John F. O'Heir, \$3.75; D. G. Pecora, \$4; Abbott-Gamble Company, 32 Broadway, \$7.63; Thomas Leahy Construction and Engineering Company, 1446 Prospect avenue, \$3.10; McHarg, Bart & Co., 299 Broadway, \$4.35; Joseph F. Eagan, 306 West Sixty-eighth street, \$4.33; D. L. Delaney, 590 Fordham road, \$3.25; Guidone & Gilardi, 1 Madison avenue, \$3.85; R. K. Everet Company, 32 Union square, \$3.97; J. M. Knopp, 230 West Nineteenth street, total bid, \$20,660.

Rochester, N. Y.—The following bids have been received by the Board of Contract and Supply for macadam pavement on Albemarle street: Whitmore, Rauber & Vicinus, \$15,770; F. C. Lauer & Sons, \$16,555; F. A.

Brotsch, Jr., \$16,624; Brayer & Albaugh, \$17,017; H. N. Cowles, \$17,276; Frank V. Brotsch Company, \$18,131.

West Point, N. Y.—Robert L. Raynor, General Manager of the Layton Fire Clay Company, of McKeesport, Pa., has secured the contract for furnishing the United States Government at West Point twenty-seven carloads of paving block, the Layton Fire Clay Company's material having been chosen in preference to about a dozen other makes.

Maxton, N. C.—Abel & Edwards, of Hickory have been awarded the contract for constructing a water works and a sewerage system at about \$40,000.—J. M. Bandy, Laurinburg, N. C., Engineer.

Hatton, N. D.—Ed. Colton has been awarded contract for new school, to cost \$19,000.

Ashtabula, O.—T. P. Fitzgerald, city, has been awarded a contract for paving Sherman street at \$2,904.08; also for paving West Sibley street at \$2,700.91.

Bryan, O.—The New York Construction Company, of Columbus, has been awarded the contract of laying \$7,000 feet of new water mains on several streets, at a cost of \$3,500, which includes ten new fire hydrants.

Coshocton, O.—John Thorn has been awarded contracts for building a number of culverts.

Dayton, O.—Contracts have been let as follows: For paving of Bacon, from Clinton to Dutoit streets, to David Beard, with Carlyle block, at \$2,708.50; Montgomery, from Third to Fifth streets, to David Beard, with Portsmouth block, at \$6,901, and Clinton, from Third to Fifth streets, to David Beard, with Carlyle block, at \$7,038.50. All the contracts were let subject to the bricks coming up to the test. This is up to City Engineer Cellarius, who is now waiting on the result, the tests being made at the Ohio State University at Columbus.

The Dayton Supply Company has the contract to furnish the water works with pig lead at \$4.49 per ton, and the United States Cast Iron Pipe and Foundry company that of furnishing various sizes of pipe.

Fostoria, O.—George M. Fluk has been awarded the contract by the Board of Public Service for the construction of sewers in Columbus avenue and Town street at \$5,498.

Mansfield, O.—T. W. Hill and C. M. Rowland have been awarded sewer contracts amounting to about \$12,000; F. Gandart & Son have the contract for concrete foundation and paving with Metropolitan brick Bowman street, at \$15,000; J. W. Paule will pave Newell road with brick at \$7,200, and

Prescott road at \$2,300, West First street with Metropolitan brick, \$6,800; Franklin avenue with Metropolitan brick, \$4,600; Her-ring & Son have a number of contracts aggregating \$15,000; Getting Bros. have been awarded the contract for grading Florence avenue, and W. H. McHugh, of Springfield, Olive street with Big Four brick with tar filler.

Marion, O.—Brady & O'Connell have been awarded contract for repairing the various pikes; John D. Owens & Son were awarded the contract for the repair of the Morral pike with crushed stone.

Steubenville, O.—Henry Floto was awarded the contract for a 10-foot concrete arch culvert on Lincoln avenue; H. M. Bates was awarded the Ross street and the North Third street sewers; Alley B sewer was awarded to Edwards & Early, of Toronto.

Youngstown, O.—Turner & Olson have been awarded contracts for the construction of crosswalks throughout the city.

The Cleveland Trinidad Paving Company is low bidder for paving Wick avenue, from East Madison to the city limits; sheet asphalt will be used; estimate, \$12,250.

Zanesville, O.—Bids for concrete retaining wall have been received by the Board of Public Works as follows: Adams Bros., \$4,350; G. M. Lynne, \$8,195; Fritz Bros., \$6,075; Clifton Bros., \$5,890; Petit & Abele, \$4,885; F. M. Townsend, \$5,900; W. S. Gregg & Co., \$6,072.50; J. A. Swingle & Co., \$5,582.50, and John C. Williams, \$6,045.

W. S. Gregg has been awarded contract for grading Ninth street at \$6,000.

Ponca City, Okla.—The Sands Construction Company, Kansas City, has been awarded contract for constructing sanitary sewer system at \$15,490; other bids were J. J. Dunnegan, Shenandoah, Ia., \$17,963; Lund & Beatty, Blackwell, Okla., \$116,600; Derr & Erly, Oklahoma City, \$20,406.36; Veigard Plumbing and Electric Company, Oklahoma City, \$16,886.70; M. Cunyon, city, \$16,699; Hamm Company, Enid, Okla., \$16,578.10. The details of the successful bid follow: Excavation and refilling: Under 8 feet, 24% cents; 8 to 12 feet, 37% cents; 12 to 16 feet, 52 cents; 16 to 20 feet, 63% cents; furnishing and laying 8-inch s. s. pipe, 26% cents; 10-inch, 37 cents; 12-inch 39% cents; 6-inch on 8-inch Ys, 96 cents; 6-inch on 10-inch Ys, \$1.35; 6-inch on 12-inch Ys, \$1.54; furnishing and building manholes, \$36; flush tanks, \$75 lampholes, \$6; rock excavation, \$3.

M. Cunyon was awarded contract for haul-

ing and laying 26.50 feet 6-inch cast-iron pipe, 16% cents; 20,000 feet 4-inch, 15 cents; hauling and setting two 6-inch valves, \$2.50; fifteen 4-inch valves, \$2; 27 hydrants, \$4; total, \$3,580.25. Other bids received were: G. Jaeger, Rich Hill, Mo., \$3,676.75; Kirby, Mayfield & Shaw, Lawton, Okla., \$3,425.35; J. J. Dunnegan, Shenandoah, Ia., \$3,499; N. S. Sherman, Oklahoma City, \$3,681.25; T. C. Brooks & Son, Jackson, Mich., \$3,974.50; Hamm Plumbing Company, Enid, Okla., \$3,413.75; A. O. Lund & J. W. Beatty, Blackwell, Okla., \$3,820; Squire Electric Company, Kansas City, Mo., \$4,716.50.

The U. S. Pipe Company, St. Louis, was awarded contract for furnishing 20,000 feet 4-inch cast-iron pipe at \$27.25; 2,650 feet 6-inch at \$26.75, and 7,900 pounds special castings at \$63 per ton; total, \$7,413.39; the American Cast Iron Pipe Company, Birmingham, Ala., bid \$7,456.25, and the Hamm Plumbing Company, Enid, Okla., \$7,651.65.

The English Tool & Supply Company, Kansas City, Mo., was awarded contract for twenty-seven hydrants at \$25.25; fifteen 4-inch gate valves, \$6.35; two 4-inch gate valves, \$10.45; seventeen gate boxes, \$3; total, \$848.90. Other bids were Hamm Plumbing Company, Enid, Okla., \$856.45; Bourbon Copper & Brass Company, Cincinnati, \$797.50; Chapman Valve Company, St. Louis, \$853.20; Ludlow Valve Company, Kansas City, Mo., \$864.55; Darling Valve Company, Williamsport, Pa., \$780.20; Roe Stephens Company, Detroit, Mich., \$904.36; Western Valve Company, Kansas City, Mo., \$819.45.—Burns & McDonnell, Scarritt Building, Kansas City, Mo., Engineers.

Cape Girardeau, Mo.—W. C. Mullins, Kansas City, was low bidder for constructing sewers in Sewer District No. 1 as follows: Eleven miles 8 to 24-inch vitrified pipe ¾ to 2 inches, thickness of shell, in 6 to 30-foot trench, clay and rock excavation, macadam paving to be excavated and relaid at 14 cents to \$1.25 per lineal foot; total, \$16,226.50; Y and T branches, \$1,479.54; pipe laying, \$5,023; excavating and back-filling, \$29,088.60; manholes, flush tanks and miscellaneous, \$5,702; manholes, \$40; rock excavation, \$4 per cubic yard; sheathing, left in trench, \$25 per M; flush tanks, including flushing appliance, \$70; catch basins, \$30; wages of common labor, \$1.75 per day; grand total, \$57,519.64; other bids were Hawes Brothers, Chicago, Ill., \$57,236.29; Reeb Bros., Belleville, Ill., \$59,233.50; Edward Healy, city, \$61,196.86; R. C. De La Hunt, Cedar Rapids, Ia., \$61,457.54.—C. C. Hawley, City Engineer.

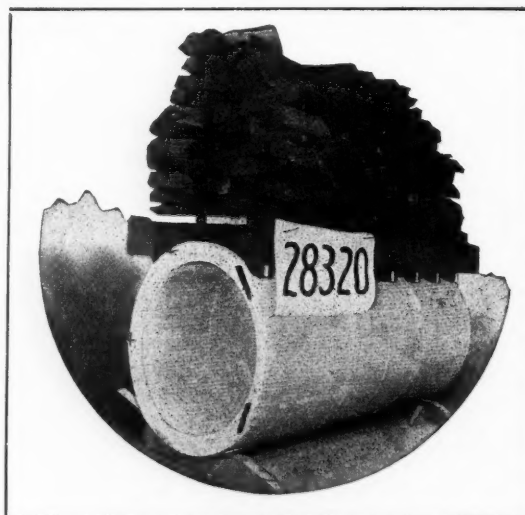
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Proposals

COVERED MASONRY RESERVOIR

Board of Water Commissioners,
43 Bridge St., Springfield, Mass.
May 20, 1908.

Sealed proposals will be received by the Board of Water Commissioners of the City of Springfield, Mass., until 2 o'clock, Thursday, June 18, 1908, for the construction of a covered masonry reservoir with gate houses, dwelling and appurtenances, as included under little River Water Supply, Contract No. 3.

The site of the work is on Provin Mountain in the town of Agawam, five miles from the city of Springfield. The reservoir will cover an area of 92,000 square feet and will have a depth of twenty-six feet.

Each bid must be accompanied by a certified check drawn upon a State or National bank for \$5,000. A bond of \$40,000 will be required, to be executed by the party to whom the contract is awarded.

Booklets containing information for bidders, form of proposal, specifications, contract and bond may be obtained at the office of E. E. Lochridge, Chief Engineer, Springfield, Mass., and at the office of Hazen & Whipple, Consulting Engineers, 103 Park avenue, New York City.

The Board reserves the right to reject any or all bids or to accept any bid should they deem it for the best interests of the city so to do.

C. H. BENNETT,
Chairman.

E. E. STONE,
W. E. SANDERSON,
Board of Water Commissioners.

E. E. LOCHRIDGE,
(22-23) Chief Engineer.

REINFORCED CONCRETE VIADUCT

Commonwealth of Pennsylvania,
State Highway Department,
Harrisburg, Pa.

Sealed proposals will be received by the State Highway Department of Pennsylvania, under the Act approved June 13, 1907, for the erection of one reinforced concrete viaduct, over Ten Mile Run Branch, P. R. R., on the National Pike, in Washington County. Plans and specifications can be seen at the offices of the State Highway Department, room 536, 1011 Chestnut street, Philadelphia; 303 Hostetter Building, Pittsburgh; Washington, Pa.; and Harrisburg, Pa. Bidding blanks will be furnished by the State Highway Department upon request. Bids must be endorsed "Proposals for Erection of Concrete Viaduct in Washington County," and received at the office of the State Highway Department not later than June 5, 1908.

JOSEPH W. HUNTER,
(22-23) State Highway Commissioner.

PAVING, CURB AND GUTTER

Johnson City, Tenn.

Sealed proposals will be received by the Recorder of Johnson City, Tenn., until 4:00 o'clock p.m., June 18, for the paving of Improvement Districts 1, 2 and 3, under provisions of Chapter 276 of the Acts of 1907, and one block on Main street, approximately 21,000 yards, and 6,100 lineal feet of concrete curb or gutter, according to plans and specifications in office of City Engineer. Certified check or approved bond for \$1,000 shall accompany each bid. City reserves right to reject any and all bids. Bids will be opened by the Council at 7:30 p.m., June 18th, in open session. Payments in three improvement districts to be made 40 per cent. cash and 60 per cent. in certificates of indebtedness, as the work progresses, and Main street to be paid in cash as the work progresses.

E. E. ELLSWORTH,
Recorder.

L. N. WILSON,
(22-23) City Engineer.

PAVING AND EXCAVATING

Notice to Contractors

Paducah, Ky., May 25, 1908.

The Board of Public Works will receive bids until 3 o'clock p.m. June 9, 1908, for the improvement of Broadway and Jefferson streets, from Ninth to Eleventh streets.

Bids will be received on sheet asphalt, brick paving block and Warren's bitulithic paving, and figures on each bid reported to the General Council for their selection of material.

Approximate quantities are as follows: Excavation, 3,800 cubic yards. Paving, 10,000 square yards.

A certified check on a bank of the City of Paducah, Kentucky, payable to John J. Dorian, City Treasurer, for \$500 must accompany each bid. Plans and specifications can be seen at the City Engineer's office.

This being portion of same work for which bids were opened on May 12, 1908, and all bids rejected on account of being too high. For further information apply to

L. A. WASHINGTON,
City Engineer.

(23-24)

STREET LIGHTING

Wilkes-Barre, Pa.

Sealed proposals will be received at the office of the City Clerk, Wilkes-Barre, Pa., until Tuesday, June 16, 1908, at 12 o'clock, noon, for lighting the streets, lanes and public places of said city with incandescent gas or naphtha lights for the period of three or five years from the 15th day of July, 1908, in accordance with specifications and bidding blanks on file in said office, copies of which may be had upon application to the City Clerk. Proposals to be endorsed "Proposals for Street Lighting" and addressed to Fred H. Gates, City Clerk, Wilkes-Barre, Pa., and must be accompanied by a certified check in the sum of one thousand dollars made payable to the Treasurer of the City of Wilkes-Barre and must be in the hands of the City Clerk not later than 12 o'clock, noon, June 16, as aforesaid. The Joint Lighting Committee reserves the right to reject any or all bids not deemed advantageous to the City of Wilkes-Barre.

R. H. RICHARDS,
Chairman.

(23-24)

SALE OF ELECTRIC LIGHT PLANT

Valley City, N. D.

Sealed bids will be received by the City Council of the City of Valley City, North Dakota, up to 8 o'clock p.m., Monday, July 6, 1908, for the sale of the city's electric light plant. Said bids must be addressed to the City Auditor of said city and must be endorsed on the outside thereof, "Bids for Electric Light Plant."

No bid will be considered which is for a less sum than \$40,000, and all bids must be accompanied by a certified check for 5 per cent. of the amount of bid, and made payable to the City Treasurer of said city.

An exclusive 20-year franchise will be granted the successful bidder, the terms and conditions of which will be agreed upon on the acceptance of any bid.

An inventory and any information can be obtained from the City Auditor of said city upon application.

The right is reserved to reject any and all bids.

By order of the City Council.

H. F. HALVERSON,
City Auditor of Valley City, N. D.
Dated May 12, 1908. (23-26)

AQUEDUCT

Board of Public Works.

Los Angeles, Cal., May 15, 1908.

Sealed proposals will be received at the office of the Board of Public Works, July Seventeen, 1908, for the construction of the Jawbone Division of the Los Angeles Aqueduct, with a capacity of four hundred second feet, including about forty-three thousand lineal feet of lined tunnel, sixty thousand lineal feet of lined conduit, and three hundred forty thousand cubic yards of excavation. The work is subdivided into three sections, and separate or lump sum proposals will be received. Plans and specifications may be obtained from the Board.

HORACE B. FERRIS,
Secretary.

REINFORCEMENT FOR CONDUIT

Dallas, Texas.

Sealed bids will be received at the office of the City Secretary of the City of Dallas, Texas, until 3 o'clock P. M., Wednesday, June 10th, 1908, for furnishing the following quantities of bars for reinforcement in new conduit, to be delivered f.o.b. this city: 2,132 pieces of bars 7 feet 8 inches long; 800 pieces of bars 8 feet long; 1,600 pieces of bars 2 feet long; 35,000 lineal feet of bars 24 to 30 feet in length.

The above steel is to have a net sectional area of .19 sq. in. or nominally $\frac{1}{2}$ -inch square, and to weigh about .66 pounds per lineal foot. It is to be of mild steel having a tensile strength of not less than 50,000 pounds per sq. inch, and is to be of same form as what is known as a "Mechanical Bond Bar."

The city reserves the right to reject any or all bids. Envelopes must be marked "Bids on Reinforcement."

J. B. WINSLETT,
City Secretary,
City of Dallas, Texas.

(23)

PAVING WITH BRICK ON CONCRETE

Charlotte, Mich.

The City of Charlotte, Michigan, hereby gives notice that sealed proposals will be received until 4 o'clock P. M., on the 15th day of June, 1908, at the office of the City Clerk for furnishing of all material and doing the work of grading and paving Lawrence avenue, west, from Cochran avenue to the east line of Bostwick avenue, and Lovett street, east, from the east line of Cochran avenue to the west line of Washington street, and westward, from the west line of Cochran avenue to the east line of Bostwick avenue, on concrete foundation with asphalt filler. Bidders will also state the price of combined curb and gutter. The work to be done according to specifications, plans, and diagrams on file in the office of the City Clerk, and which plans and diagrams contain an estimate of excavation and quantity work to be done. A guarantee of workmanship and durability for the term of five years will be required. A certified check for one thousand dollars must accompany each bid; the same to be forfeited if the bid be accepted and the bidder neglect or refuse to enter into contract. The city reserves the right to reject any and all bids. Bidders will furnish satisfactory surety bonds to be approved by the Council of said city for performance of contract, for labor and material, and for said guaranty.

CLAUDE E. FISHER,
City Clerk.

(23-24)

WANTS

WANTED—Traveling salesman for the Pacific Northwest to sell pipe and water works materials. Must have experience and best of references. Good salary paid to the right man. All applicants must state age and inclose letters of reference from their last employer. Address Pipe, Municipal Journal and Engineer. 20-21

POSITION WANTED by a municipal engineer: technical education and twelve years' practical experience in paving, sewers and municipal improvements; best of references; 33 years; American. E. H. S., care Municipal Journal and Engineer. (21-24)

SUPERINTENDENTS—Municipal, civil, stationary, hydraulic, and heating engineers; landscape architects and designers; chemists; salaries, \$1,000 to \$5,000; positions open all sections. Write, Hapgoods, 305 Broadway, New York; or 1010 Hartford Bldg., Chicago.

WATER WORKS POSITION WANTED—Experienced in maintenance, Pipe Laying and meters. Careful manager and responsible. F. W. H., care Municipal Journal.

RAILS

Locomotives
Contractors' Equipment

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SEND FOR OUR WEEKLY
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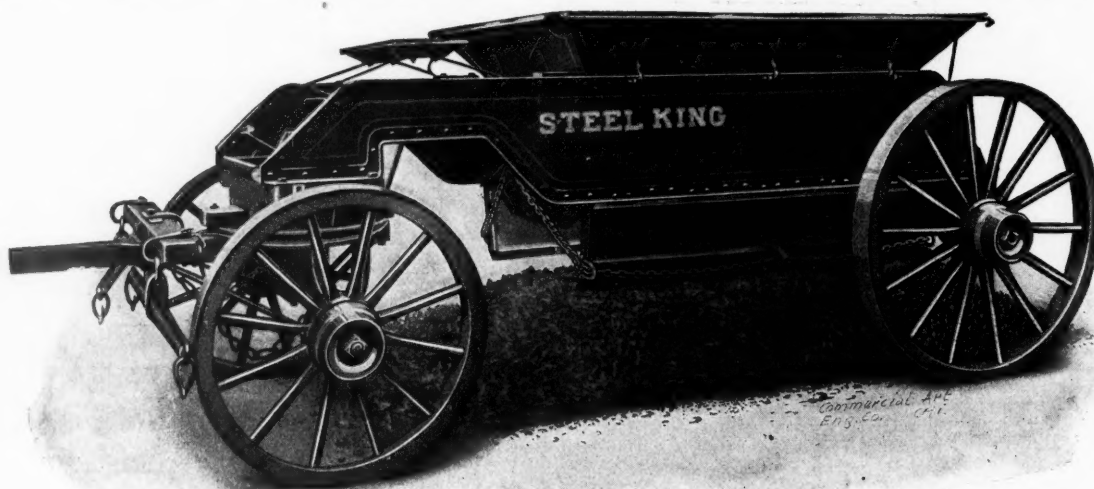
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STEEL KING DUMP WAGON



STEEL KING LOAD DUMPED.

DID you ever see bottom doors swing so high? When open, they reach but little below the rear axle. Almost 18 inches above the ground. Not much lower when opened than when closed. You know what that means. Easy to pull off the load when dumped,—anywhere! (Fully covered by our patents.) Other manufacturers use steel bottom doors, because the doors have the roughest usage. We make the rest of the box as good as the doors—all steel.

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SYMONS DUMP WAGON WORKS

305 OLD COLONY BUILDING, CHICAGO

A Chicago Sewer Excavator Summary

In previous talks we have explained one by one the superior features of the CHICAGO SEWER EXCAVATOR as a trench excavating machine. In this talk we shall summarize a few of these features briefly:

1. The Chicago Sewer Excavator is **leased, not sold**.
2. It **cuts true to line and level** in large trenches as well as small ones.
3. It **saves from 100 to 200 men**.
4. It has **positively self-cleaning buckets**.
5. It **allows of sheeting close to the machine**.
6. It **travels ahead of the work** and brings no weight on sides of trench.
7. It **will take out boulders**.
8. It **will excavate shale rock**.
9. It **eliminates scaffoldings**.
10. It **is leased, not sold**. You hire it as you hire a team from the livery stable, get it as quickly, pay for the work it does, and return when that work is finished.



There are other points, which we give in our catalogue No. 110.

Municipal Engineering and Contracting Co.

Main Office, Railway Exchange, Chicago, Ill.

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